Much of this language was incorporated into section 104(c)(4) of CERCLA, although Congress deleted the need to evaluate the subsection requiring EPA to consider "the technical and financial capabilities" of a party ordered to clean up a site.

c. Case Law

None

3. Designation of Hazardous Substances and Reportable Quantitites

a. Statutory Directive

Section 101(14) of CERCLA specifies the substances that are considered "hazardous" under the Act. Section 102 of CERCLA gives EPA the authority to designate additional substances as hazardous if their release "may present substantial danger to the public health or welfare or the environment..." It also requires EPA to establish "reportable quantities" of hazardous substances. See, Fed. Reg. 2351 (May 23, 1983). Releases of hazardous substances in excess of such quantities must be reported to the government under section 103.

b. Legislative History

It is not clear from the legislative history exactly how EPA is required to balance costs and benefits in designating hazardous substances and reportable quantities. The history suggests that reporting requirements must be practical, not duplicative and not unduly burdensome. Both private sector and administrative costs seem important in making these determinations. However, Congress provided little additional guidance in this area, and apparently accorded the agency relatively broad discretionary authority.

The concept of reportable quantities is derived from section 311 of the Clean Water Act, which has had a fairly stormy legal and regulatory history. See, T. Garrett, "Federal Liability for Spills of Oil and Hazardous Substances under the Clean Water Act," 12 Nat. Res. Lawyer 693 (1979).

As introduced, the principal Senate bill specified certain substances as hazardous and authorized EPA to designate additional hazardous substances if they "may present substantial hazardous danger to the public health or the environment" when discharged or released "in any quantity." S. 1480, section 3(a)(1), 96th Cong., 2d Sess. (1980). The government was authorized to establish quantities of such additionally designated substances which, when released or discharged, "may be harmful to the public health or the environment" Id. The bill contained sweeping prohibitions on releases of hazardous substances, as well as strict notification (reporting) requirements. Id., section 3(a)(2), (3).

In reporting the bill out of Committee, the Senate altered the language of the bill to eliminate the words "in any quantity," and to add "welfare" protection as a regulatory criterion. It retained the strict notification requirements, but added an exemption for "federally permitted" releases. S. 1480 as reported, 96th Cong., 2d Sess, section 3(a)(2),(3) (1980). It also emphasized that a single "reportable quantity" could be set for each hazardous substance.

The new language of the bill was explained by the Committee:

> The provision intentionally omits from the requirement to determine "reporting" quantities any reference to harm or hazard. A single quantity is to be determined for each hazardous substance, and this single quantity requires notification upon release into any environmental medium. It would be virtually impossible to determine a single quantity applicable to all media while at the same time linking such quantity to any subjective concept of harm.
>
> It is essential that such quantities be relatively simple for those subject to notification requirements to understand and comply with. Since releases in such quantities trigger notification requirements, but do not, in and of themselves, give rise to other liabilities under this Act, the President's broad discretion to select quantities will not unfairly burden those persons subject to the Act.

> In determining reportable quantities under this paragraph, the President may consider any factors deemed relevant to administering the reporting requirements or the President's other responsibilities under this Act. Administrative feasibility and practicability should be primary factors. In addition, the President may revise such regulations from time to time if under-reporting or over-reporting is occurring under existing regulations.
>
> U.S. Senate, Rep. No. 848, 96th Cong., 2d Sess, p. 29 (1980) (emphasis added).

After being reported out of Committee the Senate bill was further modified to read as CERCLA does today. See, 126 Cong. Rec. S. 14716, Amendment No. 2622 to S. 1480 (November 19, 1980).

Senator Randolph, one of the sponsors of the amended bill, explained some of the changes:

> The Environment and Public Works Committee does not intend for the notification elements of the bill to apply to the federally permitted releases defined in section 101(10).
>
> * * *
>
> Another change in Goverment notification from that in S. 1480 involves the establishment and use of reportable quantities of hazardous substances under section 102. The earlier Senate proposals authorized regulations establishing reportable quantities for hazardous substances, but required reporting of all releases of a hazardous substance.
>
> Authority to designate additional hazardous substances and to establish reportable quantities for all hazardous substances is retained, but reporting of releases is now limited to those involving such reportable quantities.
>
> As noted by the Committee on Environment and Public Works (Report No. 96-84 (sic), p. 29), determination of such quantities need not take into account harm to public health or the environment. Reportable quantities are used solely as a Government notification trigger, and are not relevant under this act for purposes of liability or assessment of civil penalty.
>
> 126 Cong. Rec. S. 14965 (Nov. 24, 1980) (emphasis added).

c. Case Law

None

4. Insurance and Financial Responsibility

a. Statutory Directive

Two sections of CERCLA-section 107(k)(4)(B) and section 108-authorize EPA to establish financial responsibility requirements for persons engaged in activities involving hazardous substances. Section 107(k)(4)(B) covers post-closure liability of hazardous waste disposal facilities. Section 108 is not limited to post-closure coverage, and applies to both vessels and a wider variety of facilities.

The post-closure provisions require the President to examine whether it is "feasible" to use private insurance as an optional method for post-closure financial responsibility. If this is feasible, the President must establish "minimum standards" for such insurance, and "reasonably expeditious procedures" for insurers to meet these standards.

The broader financial responsibility provisions of section 108 require certain vessels to maintain specific dollar amounts of financial protection. After 1985, the President is required to issue financial responsibility rules for facilities in cooperation with commercial insurers. Levels of required financial responsibility for classes of facilities should reflect "the degree and duration of risk" associated with the activities of such facilities. Where possible, imposition of incremental annual increases in financial responsibility for facilities should be used to achieve the requirements.

b. Legislative History

The post-closure financial responsibility requirements of CERCLA were derived from one of the Senate Superfund bills The language on post-closure liability was inserted during Committee mark-up of the bill, but it did not contain financial responsibility requirements. These were added, without comment, during floor amendments. See, 126 Cong. Rec. S 14719 (November 19, 1980).

The broader financial responsibility requirements of section 108 were similarly derived from the Senate. See, S. 1341, section 4, adding section 605 to the Clean Water Act, 96th Cong., 1st Sess. (1979); S. 1480, section 7, 96th Cong., 2d Sess. (1980). As reported out of the Senate Environment Committee, the language was similar to that ultimately enacted in CERCLA.

The Committee discussed the incremental "phase-in" provisions, their relationship to existing insurance markets, and the burdens of obtaining insurance for facilities:

> In order to avoid severe dislocations and unwarranted intermodal transportation shifts, the requirements other than for vessels are to phase in gradually. The first ones are to be promulgated no sooner than five years after enactment and even then they must phase in over no fewer than three additional years. This phasing was drafted in consultation with representatives of the domestic insurance industry to assure that as the need arose, commercial insurance would be available.
>
> * * *
>
> The requirements would be imposed first on those classes of facilities which have the highest and most frequent damages. The government is required to identify these groups and publish this finding three years after enactment, thus providing two years notice of which groups will be first subject to the requirements. Once the financial responsibility responsibility requirements are developed, they would be phased in over a period of no fewer than three years and no more than six years. The purpose of this approach is to allow time for the accumulation of information while keeping this market open to commercial insurers. There will be five years in which claims experience can be built up, then another three year-period in which insurers can gradually enter the market.
>
> U.S. Senate, Rep. No. 848, 96th Cong., 2d Sess, pp. 92-93 (1980).

c. Case Law

None

5. Liability Limits for Certain Vehicles and Carriers

a Statutory Directive

Sections 107 (c)(1)(A), (B) and (D) of CERCLA contain mandatory liablity limits for certain vessels and facilities. These limits were inserted in the Act, in part, because of concerns about the insurability of CERCLA. See, e.g., 126 Cong. Rec. S. 12917 - 12923 (Sept. 18, 1980); 126 Cong. Rec. S. 13364-13366 (Sept. 24, 1980). Section 107(c)(1)(C) of CERCLA, however, provides the President with the discretion to establish certain liability limits for motor vehicles, aircraft, pipelines, and rolling stock. In doing so, the President must consider, in addition to the risks from releases by classes of such entities, the "economic impact of such limits on each such class . . "

The President has delegated the responsibility to determine appropriate liability limits under 107(c)(1) to the Department of Transportation. See, Executive Order 12316 of August 14, 1981 section 4(a) (46 Fed. Reg. 42237, August 20, 1981).

b. Legislative History

A number of legislators were concerned about the insurability of liability under CERCLA. See, e.g., 126 Cong. Rec. S. 10846 (Amendment No. 1963) (August 5, 1980); 126 Conf. Rec. S. 12916 - 12923 (Sept. 18, 1980). This resulted in the existing mandatory liability limits. The provisions giving EPA discretionary authority to limit liability for certain classes of vessels and facilities arose late in the Congressional debate. See, 126 Cong. Rec. 13366 (Amend. No. 2383)(Sept. 24, 1980). On the day the Senate passed CERCLA, Senator Cannon noted the concerns of the Senate Commerce Committee, which he chaired:

> The Commerce Committee was particularly concerned about such matters as the broad application of certain provisions to transportation and commerce and the burdens which such application would impose.
>
> * * *

> An accommodation has been reached: the compromise legislation under consideration today contains changes which we believe satisfy the problems relating to the concerns of the Committee on Commerce, Science, and Transportation. Of particular importance are the changes in the area of preemption and the addition of limits on liability for releases involving motor vehicles, aircraft, pipelines, or rolling stock. In addition, the new language in section 107(c) requires the President to issue regulations establishing limits on liability (within the statutory parameters) for various types of facilities. When regulations are called for. as here. and the subject matter concerns transportation, it is mv understanding that the Department of Transportation will be actively involved in developing and implementing such regulations. 126 Cong. S. 14981-82 (Nov. 24, 1980) (emphasis added).

Although Senator Cannon indicated the economic concerns of his Committee, and the need to involve the Department of Transportation in setting liability limits, Congress did not elaborate on the specific economic or environmental criteria to be considered in setting such limits.

c. Case Law

None

6. Discretionary Uses of the Fund

a. Statutory Directive

Section 111 of CERCLA defines the uses to which the fund shall be put. EPA's discretion in using the fund is not clearly defined. For the most part, uses of the fund are directly linked to the National Contingency Plan, which was discussed earlier. If the costs are consistent with the plan (and, in the case of privately incurred cleanup costs, such costs must be approved and certified under the NCP by the government), then the fund shall be used to cover these Costs. However, with respect to certain costs, the Act does not clearly define EPA's discretion in approving or disapproving fund expenditures.

The most important of these discretionary expenditures are section 111(c) costs, which include those monies needed for resource damage assessments, and epidemiological and other medical studies and services.

Section 111(c) costs are somewhat problematic in nature. Some of these costs are limited by Congressional appropriations, but others are not. Moreover, with respect to certain costs (e.g., those for epidemiologic and other medical studies and services, and resource damage assessment) the Act does not explain who can receive payment for such expenses. EPA may have considerable latitude in weighing the costs and benefits of paying for these expenses. Moreover, it is not clear how payment of such costs relates to the cost-effectiveness provisions discussed earlier.

b. Legislative History

The question of administrative discretion in payment of section 111(c) costs was not directly addressed by Congress. The current statutory language was inserted late in the Senate floor debate. See, 126 Cong. Rec. S. 14955-56 (Nov. 24, 1980). Senator Chafee, in discussing these provisions, simply noted:

> There are two issues which may pale in the light of the tremendous overall problem, but which are still very important indeed. One of these is the ability we are giving the fund to expend moneys to study and monitor burgeoning, problems at hazardous waste sites, before we know exactly what chemicals are there. Unless we can learn what troubles are brewing at a locating, how will we know how or if to respond? This has happened time and again in my State and it has been a continuous struggle to come up with funds to pay for such studies. I consider such capability in the fund to be absolutely necessary.
>
> Another item for which we authorize use of the fund is the cost of epidemiologic studies, victim registries, and certain diagnostic services for persons possibly suffering from long-latency diseases caused by hazardous releases. This information could be extremely helpful to possible victims and hopefully will defray Some of the costs of recovery of damages.
>
> 126 Cong. Rec. S. 15003 (Nov. 24, 1980).

Little more was said on this issue, apparently preserving considerable agency discretion in evaluating the costs and benefits of awarding payment for such expenses.

c. Case Law

None

7. Fund Financing

a. Statutory Directive

Sections 210 - 232 of CERCLA address the financing of the Hazardous Substances Response Trust Fund (HSRTF) and the Post-closure Liability Fund. These sections specify the substances to be taxed and taxes levied on each substance. The $1.6 billion HSRTF is financed jointly by federal appropriations and by taxes on chemical feedstocks and oil. The Post-closure Fund is financed by a tax of $2.13 per dry weight ton of hazardous waste received at a qualified hazardous waste disposal facility. Although section 301(a) authorizes a study of alternate taxation mechanisms, EPA has no discretion unilaterally to modify the substances taxed or the amounts of such tax. Instead, Congressional action is needed.

b. Legislative History

The legislative history of fund-financing is quite extensive. Congress explored a variety of funding options, including taxes on wastes, taxes on crude oil and petroleum, and taxes on petrochemical feedstocks. The taxation mechanism ultimately enacted was derived primarily from one of the Senate bills. See, S. 1480 as reported, section 5, 96th Cong., 2d Sess. (1980). An explanation of the taxation mechanism was provided in the accompanying report by the Senate Committee on Environment and Public Works, and

the Senate Finance Committee, US.Senate, Rep. No. 848, 96th Cong., 2d Sess., pp. 69-78, 88-91 (1980); U.S. Senate, Comm. on Finance, Revenue Aspects of S. 1480, 96th Con., 2d Sess. (1980).

c. Case Law

None

8. Additional Provisions

A number of other provisions accord the government the discretion to weigh costs and benefits in administrative action. They include the preparation of certain studies under section 301 of the Act, some of which call for economic analyses. Perhaps the most significant regulatory decision to be made under section 301 is the development of procedures and protocols for assessing natural resource damages.

This responsibility has been delegated to the Department of the Interior pursuant to Executive Order 12316 of August 14, 1981 (46 Fed. Reg. 42237, August 20, 1981, section 8(c)(3)).

Under section 301(c), procedures must be developed for simplified, generic damage assessments and for individualized damage assessments. The factors to be considered in developing these rules include "replacement value, use value, and ability to recover" of natural resources. See, 301(c)(2). This section of CERCLA says nothing about the economic burdens such assessments may pose on the business community. However, Senators Simpson and Stafford discussed their concerns over the economic implications of resource damage assessments:

> Mr. Simpson:
>
> ... I believe that some guidance must be given by Congress in this area since the definition of natural resources in section 101(b) covers a very broad array of economic and esthetic values.

Mr. Stafford:

Mr. President, let me respond to the Senator's concern by saying it is our intention that no damages for injury to natural resources be pursued until a restoration plan is developed and that rehabilitation and replacement of natural resources be accomplished in the most cost-effective manner possible. Our position has not changed on this point.

THE SAFE DRINKING WATER ACT OF 1974 (42 U.S.C. SECTIONS 300f-j-10)

A. Summary of Act

The Safe Drinking Water Act (SDWA), Pub. L. No. 93-523 is designed to ensure that safe, disease-free drinking water is delivered by public water systems nationwide. The Act was passed largely in response to increasing concern over long term exposures to low levels of carcinogens in water, coupled with news of several outbreaks of acute diseases caused by waterborne organisms. The goal of providing safe drinking water at the consumer's tap is to be achieved by national standards implemented and enforced through a state-federal regulatory mechanism. States are encouraged to assume primary responsibility (or "primacy") for implementation, enforcement, and monitoring of national guidelines and standards.

SDWA authorizes the Administrator of the Environmental Protection Agency (EPA) to set national primary and secondary drinking water standards to protect the public health and welfare, respectively. Such standards may establish a maximum level of a particular contaminant in drinking water, or they may provide for the use of specific treatment techniques to reduce pollution.

The Act also contains special provisions for protecting underground sources of drinking water from underground injection of chemicals. These underground injection control (UIC) provisions include authority for the Administrator to designate certain aquifers as the sole or principal sources of drinking water for different geographic areas. The Act prohibits new underground injection wells, or federal assistance in project, that would create a significant public health hazard by contaminating the designated aquifer.

The statute contains provisions for variances and exemptions, emergency powers, penalties, and grants for state programs. There are requirements governing recordkeeping, citizen's suits, judicial review, research and training, and authority for EPA to respond to state inaction. Also noteworthy is the section that details procedures

for notice to water consumers when their water supply does not meet the applicable standards.

The major amendments to the 1974 Act were added in 1977 by Pub. L. No. 95-190, 91 Stat. 1393. These amendments, in general, were designed to give states more time to achieve primary enforcement responsibility. In addition, the variance and exemption provisions were expanded, allowing public water systems more time to install needed controls. This postponement of compliance deadlines was intended to allow small systems to develop less costly treatment methods. Economics plays a substantial role in many parts of the Act and is relevant in setting contaminant levels, establishing treatment technologies, approving state programs, and implementing the variance and exemption provisions.

B. Regulatory Activities

1. National Drinking Water Regulations - Section 300g-1

a. Statutory Directive

This section of the Act is central to the SDWA regulatory scheme. It provides EPA with the authority to prescribe national primary and secondary drinking water standards to adequately protect the public health and welfare, respectively, from adverse effects of contaminants. Section 300g-1(a)-(c). The primary or public health standards are standards which specify the maximum level of contaminants (MCLs) allowable in drinking water or, if setting MCL's is not feasible, which provide for appropriate treatment technologies. The secondary or public welfare standards are based on aesthetics (factors that consumers can experience directly such as color, odor, taste, and foaming) and are aimed at the control of contaminants affecting public acceptance of drinking water quality.

Specifically, a primary standard: (1) applies to public water systems; (2) specifies contaminants that may have an adverse effect on human health; (3) specifies a MCL level, if it is feasible to determine the level of a contaminant in a water system, or a treatment technique, if such a determination is not feasible; and (4) contains procedures and guidelines necessary to achieve dependable compliance with the MCL.

Subsections (a) and (b) set forth a three-phase procedure for issuing national primary drinking water regulations (primary regulations). Phase one involves the promulgation of interim regulations to "protect health to the extent feasible, using technology, treatment techniques, and other means, which the Administrator determines are generally available (taking costs into consideration)...." The requirement to issue interim regulations, mandating use of technology available on the date of SDWA's enactment, reflected Congressional intent that the Agency move as expeditiously as possible to control contamination. Later regulatory phases were to result in stricter standards. In phase two the National Academy of Sciences (NAS), under contract with EPA, is to report on the potential health effects of contaminants and to propose recommended MCLs based on health risk considerations alone.

These recommendations trigger phase three, during which EPA issues recommended MCLs and revised primary regulations. The recommended MCLS are to be "set at a level at which, in the Administrator's judgment based on such [NAS] report, no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety." Section 300g-1(b)(1). The Administrator is also required to specify revised primary standards for each recommended MCL issued. These revised standards reflect enforceable levels of contamination, and must be set "as close to the recommended maximum contaminant level as is feasible."

In general, the feasibility language in the Act permits EPA to consider costs and benefits in setting revised standards. For purposes of establishing these revised standards, the Act defines feasible as "using the best technology, treatment techniques,

and other means, which...are generally available (taking costs into consideration)." Section 300g-1(b)(3). In addition, if there is no adequate detection method for a listed contaminant, the revised standards must contain technology-based standards that will "prevent known or anticipated adverse effects...to the extent feasible." Id.

Paragraph (4) of subsection (b) authorizes revision of the regulations "whenever changes in technology, treatment techniques, and other means permit greater protection of health. Moreover, regulations "shall be reviewed at least once every 3 years."

Subsections (c) and (d) address procedures for issuing national secondary drinking water standards and for rulemaking, respectively.

Subsection (e) lists the factors to be considered and the recommendations to be made by the NAS report (under EPA contract) on drinking water contaminants. The results of the report are submitted to Congress, with appropriate revision every two years as new information becomes available.

b. Legislative History

Much of the legislative history concerning section 300g-1 focuses on how considerations of costs come into play during decisionmaking about drinking water safety. For example, Representative Rogers, a key member on the House Subcommittee to the Committee on Interstate and Foreign Commerce that reported the bill out, said that costs are to be considered "only in determining how close to the recommended maximum contaminant level is feasible and in granting exemptions." 120 Cong. Rec. H. 10793 (daily ed., November 19, 1974) (statement of Rep. Rogers) (emphasis added). During Senate consideration of the bill it was stated: "The standard for both national interim primary drinking water regulations and revised national primary drinking water regulations is that health shall be protected to the extent feasible." 120 Cong. Rec. S. 20241 (daily ed., November 26, 1974) (emphasis added). The statement goes on to say that the cost of compliance must be weighed against health risks in determining

feasibility: "Where health risks are great, higher costs may be incurred, perhaps even to the point of requiring alternative sources of water." Id. The House Report explained this relationship between feasibility of the primary standard and protection of health stating:

> Economic and technological feasibility are to be considered by EPA (and..... the states) and then only for the purpose of determining how soon it is possible to reach recommended MCLs and how much protection of the public health is feasible until then.
>
> U.S. House, Report No. 1185 at 19.

Congress clearly intended to give the Administrator discretion to determine how closely the primary standards should match the maximum contaminant levels.

The Administrator of EPA, therefore, is given considerable discretion in balancing costs and benefits in setting the national primary drinking water regulations. The Administrator is directed to exercise his judgment in a "reasoned and plausible" way if he finds that a contaminant may have an adverse effect on the health of persons. He is to base his decisions on studies, research (and extrapolations therefrom) involving toxicology, epidemiology, statistics, biochemistry, and physiology. See U.S. House, Rep. No. 1185 at 10. In addition, after the Administrator receives the report of the National Academy of Sciences (pursuant to sections 300g-1(b) and (e)), he is to "carefully consider" its recommendations and can incorporate them into the revised primary standards. U.S. House, Rep. No. 1185 at 19.

Significantly, Congress appeared to recognize that EPA would be looking at a wide variety of contaminants, routes of exposures and supply systems and would need flexibility in its responses. For example, the Senate Report outlined four elements of a National Drinking Water Standard that illustrate its sensitivity to costs and benefits:

> The national primary drinking water standards will contain four separate features.
>
> First, the standards are to prescribe the maximum permissible levels of any contaminants which may exist in any public water supply system.
>
> Second, the standards may apply to any feature of the water supply system, including the treatment, storage, and distribution facilities. This element of the standards will be of

> particular importance in regulating bottled drinking water. For example, EPA may choose to limit the type of container in which bottled drinking water may be stored or sold to prevent contamination. Standards might also be set to place limits on shelf life of bottled drinking water in order to prevent the build-up of bacteria or other organisms while on the shelf. With respect to municipal or other water supply systems, standards could be set for the type of treatment facilities required in order to ensure a back-up capability if the primary treatment facility should fail.
>
> Third, the standards shall include requirements for the adequate operation, maintenance, surveillance, and monitoring of water quality.
>
> Finally, standards shall be set for site selection and construction of public water supply systems to protect facilities from floods and other natural disasters.
>
> With respect to the second, third, and fourth elements of the standards, it is anticipated that levels of performance will vary to meet the needs of the various classes of systems which will be regulated. For example, it may be entirely proper to require a higher degree of expertise and training of the operators of a large metropolitan water supply system than of an operator of an individual system serving a restaurant. Likewise, monitoring and surveillance of water supply systems should be tailored to reasonably protect the public health. Again, stiff requirements could be imposed on the larger systems which have the potential of affecting large numbers of people, while lesser requirements might be appropriate for smaller systems where the threat of widespread illness is less severe or where other factors make stiff requirements unreasonable.
>
> U.S. Senate, Rep. No. 231, 93d Cong., 1st Sess. 6-7 (1973) (emphasis added).

On the House side, a similar approach was expected. Particularly, the House Report stated that the Administrator must balance compliance costs against health risks, and base decisions about drinking water standards "on what may reasonably be afforded by large metropolitan or regional public water systems." Id. at 18. The Report continued:

> It is evident that what is a reasonable cost for a large...system may not be reasonable for a small system.... The Committee believes, however, that the quality of the Nation's drinking water can only be upgraded if the systems which provide water to the public are organized so as to be most cost-effective. In general, this means larger systems are to be encouraged and smaller systems discouraged.
>
> Id. (emphasis added).

c. Relevant Case Law

In Environmental Defense Fund v. Costle (578 F.2d 337 (D.C. Cir. 1978)), the Environmental Defense Fund (EDF) challenged EPA's SDWA interim drinking water standards for organic and nonorganic contaminants. EDF claimed that EPA was required to set comprehensive interim standards that fully controlled organics, rather than focusing on only six organic pollutants as EPA had done. In addition, EDF challenged several specific provisions of EPA's interim standards for nonorganics, including certain monitoring requirements.

The Court generally agreed with EDF's assertions regarding interim standards for organics, but upheld EPA's interim standards for nonorganics. With respect to organic chemicals, the court indicated that EPA was required to issue interim regulations, "where feasible," that would control "every contaminant that may prove injurious to health" (578 F.2d at 345). However, the Court noted that, after the case was filed, EPA had suggested that it would amend its interim regulations. The Court, therefore, remanded the issue of organics to EPA with the instruction that the Agency report back to the Court within 60 days concerning its plans for amending its interim organics standards.

With respect to the regulation of inorganics, the Court noted that: "Current knowledge of injurious effects is more well-developed and stable [than knowledge about organics]. The costs and efficacy of monitoring and treatment procedures are similarly more well established." 348 F.2d at 346. Although EDF had requested more stringent control of inorganics, the Court concluded:

> The task of the agency here is largely one of line drawing. Agency expertise and judgment must be applied in determining the optimal balance between promotion of the public welfare and avoidance of unnecessary expense. We will not interfere so long as the agency strikes a balance that reasonably promotes the legislative purpose. Id.

2. State Primary Enforcement Responsibility - Section 300g-2

a. Statutory Directive

The state-federal regulatory system under SDWA establishes the minimum requirements for nationwide protection, and envisions maximum state involvement in statutory implementation. States are encouraged to use the national standards as guidelines.

This section grants to states primary enforcement responsibility for public water systems under their jurisdiction. To achieve this status, a state must apply to the Administrator, who will grant primacy to the state if the program includes:

(1) regulations no less stringent than the federal health standards;
(2) adequate enforcement, monitoring and inspection procedures;
(3) recordkeeping and reporting requirements;
(4) permits, variances and exemptions; and
(5) adequate emergency procedures.

See section 300g-2(a). Within these constraints, the states can be flexible in the range of approaches applied under the Act and have a greater ability to consider marginal benefit and cost tradeoffs.

b. Legislative History

U.S. House, Rep. No. 1185 provides an extensive discussion of congressional intent with respect to the state-federal regulatory mechanism. It states:

> It is the Committee's intent that EPA, the States, and the public water systems begin now to maximize protection of the public health insofar as possible and to continue and expand these efforts as new, more accurate data, technology, and monitoring equipment become available. Id. at 8 (emphasis added).

The report also underscores the need for state and local flexibillity in setting standards under the Act. It allows for the use of a variety of control technologies and techniques to protect public health from the risks posed by drinking water contaminants. The report states:

> By providing for a carefully circumscribed exercise of authority by EPA, the Committee seeks to achieve the primary purpose of protection of the public health while leaving to State and local governments and the public water systems maximum flexibility in determining whether to achieve this purpose by reliance on clean source water, treatment technology, or other effective means. Id. at 14 (emphasis added).

c. Relevant Case Law

None

3. Failure of a State to Assure Enforcement of Drinking Water Regulations - Section 300g-3

a. Statutory Directive

This section deals with the failure of a state to assure that its public water systems comply with applicable standards, such as MCLs or treatment techniques. EPA enforcement is permitted, although not required, and civil penalties for violations may be imposed. The Act also establishes a mechanism for remedying instances where a state has primary enforcement responsibility but its system is not in compliance. EPA must first notify the state, wait sixty days for the state to submit a report on how the state will bring its system into compliance, and then determine whether that state has abused its discretion in carrying out its primacy responsibilities. Section 300g-3(a)(1). The Administrator may bring a civil action if the state fails to submit the report requested by EPA; alternatively, suit may be brought by EPA against the state if, after a state submits its report, the Administrator finds that the state has abused its discretion by both —

> (I) failing to implement by such sixtieth day adequate procedures to bring the system into compliance by the earliest feasible time, and
>
> (II) failing to assure by such day the provision through alternative means of safe drinking water by the earliest feasible time....
>
> 42 U.S.C. section 300g-3(a)(1)(B)(ii)(b).

By allowing the Administrator to consider feasibility in evaluating state programs, the Act explicitly recognizes the need for cost-benefit tradeoffs. Moreover, courts may include economic factors in determining appropriate sanctions under the Act The statute authorizes such judicial remedies:

> ... as protection of public health may require, taking into consideration the time necessary to comply and the availability of alternative water supplies; and, if...there has been a willful violation...the court may, taking into account the seriousness of the violation, the population at risk, and other appropriate factors, impose a civil penalty of not to exceed $5,000 for each day in which such violation occurs.
>
> 42 U.S.C. section 300g-3(b).

The remaining subsections set out procedural requirements. Subsection (c) states that owners and operators of public water systems must notify all consumers when their water systems fail to comply with an applicable standard, or if monitoring for contaminants is inadequate. There are penalties for violations of this public notice requirement.

Under subsection (d) the Administrator is authorized to notify a state if a water system does "not comply with ...secondary [drinking water] regulations and that such noncompliance appears to result from a failure of such State to take reasonable action to assure" compliance. Secondary standards are not federally enforceable, however.

Subsection (e) provides that nothing in SDWA lessens the authority of states or localities to adopt or enforce laws concerning public water systems or drinking water regulations, "but no such law or regulation shall relieve any person of any requirement otherwise applicable..." under SDWA.

Subsection (f) authorizes the Administrator to give notice and hold public hearings in cases of noncompliance with primary standards or with other requirements (described in section 300g-3(a)(1)). These hearings provide the basis upon which the Administrator issues recommendations for compliance. If, after a state receives the Administrator's recommendations, compliance is not timely, the Administrator may bring an enforcement action against the state.

b. Legislative History

The legislative history supports the interpretation of the statutory language in section 300g-3 that EPA has discretion to consider economic factors in exercising its authority to step in and enforce where a state fails to act. For example, in general, if a violation occurs in a state that has assumed primacy under SDWA, the Administrator must give notice to that state before bringing a federal enforcement action. Discussing this provision (section 300g-3) the House report states:

> ...If a system remains in noncompliance sixty days after the initial notice by EPA and if the state has failed to submit the report requested within the 15 day period or the Administrator determines that by failing to implement adequate procedures by the sixtieth day to bring the system into compliance by the earliest feasible date the State has abused its discretion in carrying out its primary enforcement responsibility, then the Administrator may commence an enforcement action under subsection (b).
>
> U.S. House, Rep. No. 1185 at 22 (emphasis added).

The report continued: "failure by a State to implement by the sixtieth day adequate procedures to bring a system into compliance by the earliest feasible time [is] considered a per se abuse of discretion by the State." Id.

The House report provides further guidance on what factors are to be weighed by the Administrator in reviewing the date set by a state for the earliest feasible time of compliance. It states that "the Administrator should consider, among other matters, all technological alternatives and financial resources which may be available to the public water system or to the entity which operates it." Id. at 23. Moreoever, as one Congressional floor statement notes, costs and benefits must be analyzed:

> [T]he determination of what the earliest feasible time may be must take not only the cost of compliance into consideration but the extent of health threat as well. Thus, the ability of a...system to finance improvements...or to provid[e] alternative [sources] of...safe drinking water must be tempered by the threat to health arising from such violation.
>
> 120 Cong. Rec. 5.20242 (daily ed., November 26, 1974) (emphasis added).

c. Relevant Case Law

None

4. Variances - Section 300g-4

a. Statutory Directive

This section authorizes variances from the national primary drinking water standards. For states with primary enforcement responsibility, variances may be granted for either of two reasons:

1) if a public water system cannot comply with MCLs due to the nature of its raw water sources and despite the application of the most effective technology; or

2) if a satisfactory showing is made that a required treatment technique is unnecessary to protect the public health.

See section 300g-4(a)(1)(A).

On its face, the Act directs states to consider a range of factors in granting a variance including economic costs and benefits, though subject to some constraint. Specifically, subsection (a) provides that: "Before a State may grant a variance under this subparagraph, the State must find that the variance will not result in an unreasonable risk to health" (emphasis added). Variances are to contain a compliance schedule that includes control measures required by the state and an incremental compliance schedule for contaminants subject to the variance. Notice and an opportunity for a hearing on the proposed schedule are prescribed. Compliance with an MCL is to be achieved according to schedule and "as expeditiously as practicable." Section 300g-4(1)(A). This open-ended language regarding practicability further infuses EPA's decisionmaking with cost considerations and, as discussed below, distinguishes variances from exemptions under the Act.

This section also details EPA's authority to review variances granted by states, thus ensuring that a state has not abused its discretion or failed to impose reasonable control measures. Additionally, EPA may grant variances to water systems in states without primary enforcement responsibility. Moreover, the Administrator has the discretion to issue a variance if an alternative treatment technique (i.e., not one issued nationally) is found to be at least as efficient and effective as the national standard.

b. Legislative History

The legislative history addresses the meaning of "unreasonable risk to health" in the SDWA section on variances. "A risk to health is...presumed to be unreasonable unless there are costs involved which clearly exceed the health benefits to be derived." 120 Cong. Rec. S.20242 (daily ed., November 26, 1974) (emphasis added). This implies that Congress anticipated that states would engage in some sort of cost-benefit analysis prior to issuing variances and exemptions.

U.S. House, Rep. No. 1185 provides examples of conditions giving rise to the issuance of variances. For systems that cannot comply with MCLs due to the nature of raw water sources the report states:

> This variance is intended to deal with the situation in which the system cannot comply with primary regulation intake requirements (and thus cannot comply with maximum contaminant level output limits) despite all reasonable technological, economic, and legal efforts to do so. The Committee anticipates that in exercising this authority States will periodically review variances to assure that they are still necessary and that all reasonable efforts to obtain access to a satisfactory raw water source are being made by the system.
>
> Id. at 25-26 (emphasis added).

Regarding the second situation described by the House Commitee--in which a variance may be issued where required treatment techniques are unnecessary to protect public health--the report notes that: "this variance is designed to apply to situations in which the system's raw water source is substantially cleaner than the minimum intake requirements." Id. at 26.

The legislative history speaks to the exercise of the EPA Administrator's discretion to review state-issued variances, also. According to the Act, once a state has been granted a variance, the Administrator may intervene only after he finds that a state has abused its discretion in a substantial number of instances. Id. This requires the Administrator "to consider the number of persons...affected by the variances or exemptions" and whether the conditional requirements have been met. Id. In other words, "a single improperly granted variance or exemption could become the object of intervention if...a substantial number of persons" are affected. Id. "Similarly, as the health risk...is increased, the number of affected persons sufficient to authorize intervention...is decreased." Id.

These statements imply, in contrast to the balancing of costs and benefits that a state must undertake in evaluating variance requests, that public health is the main concern of the Administrator in reviewing variances once issued. That is, the legislative

history does not indicate that the Administrator should consider costs in deciding whether to intervene when a variance or exemption has been improperly granted by a state.

c. Relevant Case Law

None

5. Exemptions - Section 300g-5

a. Statutory Directive

Exemptions from MCLs or required treatment techniques can be granted by a state pursuant to this section. A public water system may be exempted from an MCL requirement or from a treatment technique (or both) for compelling reasons, including economic factors. Before an exemption is granted a finding must be made that an "unreasonable risk to health" (defined in the section on "variances" above) will not result from the exemption. Authority to grant exemptions is only applicable to public water systems in operation on the effective date of the primary standards. New units are expected to comply without exemptions. The important distinction between exemptions and variances, in addition to the different criteria states must consider in granting them, is that variances are potentially open-ended in duration, while exemptions are subject to specific statutory deadlines.

Subsection (b) requires a state (or EPA in cases where states lack primary authority) to establish a compliance schedule and to prescribe interim control measures for the duration of the exemption. Notice and an opportunity for a hearing before issuance of the schedule are required. The exemption provisions also allow EPA to review state-granted exemptions. This review parallels the procedures required for variances. Applications for both variances and exemptions are to be acted upon within a reasonable time, according to regulations issued by the Administrator.

b. Legislative History

According to the House Report, the compelling factors that may lead to the granting of an exemption may include, but are not limited to: "economic factors, such as the high cost of purchasing and constructing necessary equipment or facilities and the low per capita income and small number of residents in a community served by the system." U.S. House, Rep. No. 1185 at 27.

The House report contains further explanation.

> Moreover, in considering whether economic factors are sufficiently compelling to warrant an exemption...it is anticipated that the States will weigh any planned expansion of existing facilities of the system....[I]f a system has sufficient funds to permit substantial expansion of capacity and service, these funds should first be used to assure the safe quality of the drinking water presently being supplied.
>
> In such cases, States should be extremely reluctant to grant exemptions on economic grounds.
>
> Id. (emphasis added).

Regarding the appropriate scope of EPA review (which is similar for both variances and exemptions) the legislative history is instructive:

> This system of EPA oversight is intended...to confer maximum responsibility on States which make appropriate efforts to effectuate the purposes of the Act. While some EPA review of State granted variances [and exemptions] from national regulations was deemed necessary...to assure the effectuation of the national policy, it is not intended that EPA engage in a case-by-case review or substitute its judgment for the well-exercised judgment of a State. EPA notice to a State is warranted only when a significant number of cases can be shown of State action inconsistent with the intent of this bill.
>
> U.S. House, Rep. No. 1185 at 26-27 (emphasis added).

c. Relevant Case Law

None

6. Regulations for State UIC Programs, State Primacy, and Failure of State to Assure Enforcement of Program - Sections 300h, h-1, h-2

a. Statutory Directive

SDWA also contains provisions governing the underground injection of contaminants. Essentially, the Act sets out guidelines for EPA to oversee the development of state regulatory control programs. The Administrator is to develop regulations containing minimum requirements "for effective programs to prevent underground injection which endangers drinking water sources." Section 300h(a)(2).

The term "underground injection" is defined in subsection (d). Underground injection is "the subsurface emplacement of fluids by well injection," not including "the underground injection of natural gas for purposes of storage." §300h(d)(1).

In addition, subsection (d) elaborates on the meaning of "endangers" in the context of underground injection: "Underground injection endangers drinking water sources if such injection may result in the presence in underground water which supplies...any public water system of any contaminant, and if the presence of such contaminant may result in such system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons." §300h(d)(2)(emphasis added). In promulgating regulations under this section the Administrator is directed to consider the Varying geologic, hydrological, or historical conditions, in different states." §300h(b)(3). Additionally, regulations resulting in needless disruption of existing state programs and burdensome compliance costs to industry should be avoided. Id.

Subsection (b) directs that "the Administrator...may not prescribe requirements which interfere with or impede," or otherwise cause a reduction in, oil production, "unless such requirements are essential to assure that underground sources of drinking water will not be endangered by such injection." §300 h(b)(2) (emphasis added).

These general requirements are to be carried out by the states. Section 300h-1 sets forth the prerequisites to primacy for those states listed as needing UIC programs.

The section directs the Administrator is to make a list of states in need of an underground injection control (UIC) program. If a state on this list complies with the appropriate prerequisites it will be granted the authority for implementing the SDWA requirements. The Administrator is authorized to impose restrictions on unsatisfactory state programs, and to establish programs for states failing to meet the prerequisites.

A state may authorize, either by rule or by permit, underground injection on the conditions that: (1) applicants make a satisfactory showing that the proposed injection "will not endanger drinking water sources" §300h(b)(1); and (2) the permit or rule will contain requirements for monitoring, inspection, reporting and recordkeeping. Id. Temporary permits may be issued if : (1) technology for safe injection is unavailable (taking costs into account); (2) injection would be less harmful to health than other disposal methods; and (3) available technology is used to reduce toxicity and volume of contaminants "and to minimize the potentially adverse effect of the injection on the public health." §300h(c)(2).

Section 300h-2 contains procedures similar to section 300g-3 (failure of a state to assure enforcement of drinking water regulations) but applies to cases in which a state fails to assure the enforcement of its UIC program.

b. Legislative History

The intent of the House committee that drafted the SDWA is clear concerning the minimum requirements the Administrator may impose upon states for their UIC programs, and the major policies to be implemented by this section (U.S. House, Rep. No. 1185):

> ...In requiring EPA to promulgate requirements for effective State programs to prevent underground injection which endangers drinking water sources, the Committee intends to ratify EPA's policy on deep well injection. (See 39 Fed. Reg. 12922-3, April 9, 1974). This policy was first adopted by the Interior on October 15, 1970. The policy opposes storage or disposal of contaminants by subsurface injection "without strict control and clear demonstration that such wastes will

> not interfere with present or potential use of subsurface water supplies, contaminate interconnected surface waters or other wise damage the environment." The Committee thus intends EPA to use these policy guidelines-including the exploration of alternative measures and the determination that they are less satisfactory than underground injection; preinjection tests; a geologic-hydrologic-geochemical survey and submission of such other information as is necessary to evaluate the acceptability of any proposed underground injection; the use of best available measures for pre-treatment; the use of best available techniques for design, siting, construction, operation, maintenance, and abandonment of the injection system; provisions for adequate and continuous monitoring of operations and effects--as the basis for establishing minimum requirements for effective State programs.
>
> In addition, the Committee intends that the Administrator should incorporate in such guidelines requirements for preparation of adequate contingency plans....
>
> U.S. House, Rep. No. 1185 at 29 (emphasis added).

With regard to regulating by rule or by permit under subsection 300h(b), the report states:

> In order to implement these controls to protect drinking sources with minimum administrative red tape, the Committee decided to allow EPA discretion to require States to utilize a permit system, rulemaking, or a combinatiion of the two to control underground injection.
>
> Id. at 30.

The report also addresses the issue of temporary permits:

> ...If the injection cannot be made so as not to endanger drinking water source within four years after enactment, the operation of the well must be terminated. Second, all efforts must be made to reduce the harmfulness of the injected fluid and to provide maximum protection of the public health during the pedency of the temporary permit.
>
> Id. at 30-31 (emphasis added).

Subsection (d) defines underground injection and, more importantly, underground injection which endangers drinking water sources. The House report elaborates upon this latter definition:

> This section . . . defines "underground injection which endangers drinking water sources." It is the Committee's intent that the definition be liberally construed so as to effectuate the preventive and public health protective purposes of the bill. The Committee seeks to protect not only currently-used sources of drinking water, but also potential drinking water sources for the future.
>
> ... Further contamination of such sources should not be permitted if there is any reasonable likelihood that these sources will be needed in the future to meet the public demand for drinking water and if these sources may be used for such purpose in the future.
>
> The Committee was concerned that this definition of "endangering drinking water sources" also would be construed liberally. Injection which causes or increases contamination of such sources may fall within this definition even if the amount of contaminant which may enter the water source would not by itself cause the maximum allowable levels to be exceeded. The definition would be met if injected material were not completely contained within the well, if it may enter either a present or potential drinking water source, and if it (or some form into which it might be converted) may pose a threat to human health or render the water source unfit for human consumption. In this connection, it is important to note that actual contamination of drinking water is not a prerequisite either for the establishment of regulations or permit requirements or for the enforcement thereof.
>
> Id. at 32 (emphasis added).

Regarding the role of states with respect to their UIC programs, and for failure to assure enforcement of these programs, the legislative history notes that these provisions are basically similar to sections 300g-2 and 300g-3, dealing with state primacy for primary drinking water regulations. U.S. House, Rep. No. 1185 at 32-34.

c. Relevant Case Law

None

7. Designation of Sole Source Aquifers - Section 300h-3

Areas within states may be dependent upon one aquifer which is the sole or principal source of drinking water. Section 300h-3 authorizes the Administrator to

designate such an area as a sole source or one aquifer area, either at its own initiative or in response to a petition, if its contamination would create a "significant hazard to public health." This designation means that no new underground injection well may be operated in the area without a permit. Subsection e of section 300h-3 also states that federal financial assistance for projects that may contaminate a sole source aquifer may be awarded only where assurances are made that such contamination will not occur.

b. Legislative History

U.S. House, Rep. No. 1185 discusses the need for sole source designations:

> [This] [S]ection...is designed to deal with a limited problem which may arise in the three year period before State underground injection control programs become effective...This problem may arise if an area has one acquifer [sic] which is the sole or principal drinking water source and which would pose a significant hazard to public health (short of imminent and substantial endangerment), if it were contaminated.
>
> In such a case the Administrator is authorized upon petition of any person to designate this area as one in -which no new underground injection well (as that term is defined in subsection (d)) may be operated, unless he has issued a permit for such operation.
>
> ...Petitions for permits are to be considered after notice and opportunity for hearing on the record.
>
> ...In this proceeding the burden of proof would, of course, be on the petitioner. The Administrator may issue a permit under this section only if he finds #at the operation of the proposed injection well will not cause contamination of the acquifer [sic] so as to create a significant hazard to public health.
>
> Id. at 34 (emphasis added).

c. Relevant Case Law

None.

8. Emergency Powers - Section 300i

a. Statutory Directive

This section describes the emergency powers of the Administrator. The Administrator may take emergency action if he receives "information that a contaminant which is present in or is likely to enter a public water system may present an imminent and substantial endangerment to the health of persons §300i(a) (emphasis added).

An emergency situation could exist if either: (1) a violation of a primary standard is so severe that it presents a serious health risk prior to the grace period for state enforcement; (2) new information indicates that an existing standard is inadequate; or (3) an unregulated contaminant is found to present serious risks. If practicable, the Administrator may consult with states or local authorities to verify such information and to determine what actions will be taken to protect against the endangerment.

The Administrator has great discretion under subsection (a) to take action for the protection of the public. These acts may include (but are not limited to): (1) issuing orders; and (2) bringing a civil suit to obtain a restraining order or temporary or permanent injunction to provide an adequate remedy. Fines of up to $5000 per day of violation or noncompliance are authorized under subsection (b).

b. Legislative History

The phrase "imminent and substantial endangerment" was defined by Senator Hart: "a danger will be substantial in virtually all instances when the violation of a standard involves a public! health threat and there are not other factors present which might make the risk acceptable." 120 Cong. Rec. S.20241 (daily ed., Novembr 26, 1974) (emphasis added). These "other factors" could include economic considerations. Based on this definition, it is arguable that some form of cost-benefit balancing is required before emergency action can be taken.

The extensive analysis of congressional intent with respect to the SDWA emergency powers in U.S. House, Rep. No. 1185 suggests that any health considerations were to take precedence over cost considerations in the exercise of emergency powers. The statement reads:

> [T]he section authorizes the Administrator to issue such orders as may be necessary (including reporting, monitoring, entry and inspection orders) to protect the health of persons, as well as to commence civil actions for injunctive relief for the same purpose.
>
> The authority to take emergency action is intended to be applicable not only to potential hazards presented by the contaminants which are subject to primary drinking water regulations, but also to those presented by unregulated contaminants.
>
> The authority conferred hereby is intended to be broad enough to permit the Administrator to issue orders...to obtain relevant information about impending or actual emergencies, to require the issuance of notice so as to alert the public to a hazard, to prevent a hazardous condition from materializing, to treat or reduce hazardous situations once they have arisen, or to provide alternative safe water supply sources in the event any drinking water source which is relied upon becomes hazardous or unuseable.
>
> ...Administrative and judicial implementation of this authority must occur early enough to prevent the potential hazard from materializing. This means that "imminence*' must be considered in light of the time it may take to prepare administrative orders or moving papers, to commence and complete litigation, and to permit issuance, notification,, implementation, and enforcement of administrative or court orders to protect the public health.
>
> Furthermore, while the risk of harm must be "imminent" for the Administrator to act, the harm itself need not be. Thus, for example, the Administrator may invoke this section when there is an imminent likelihood of the introduction into drinking water of contaminants that may cause health damage after a period of latency.
>
> Among those situations in which the endangerment may be regarded as "substantial" are the following: (1) a substantial likelihood that contaminants capable of causing adverse health effects will be ingested by consumers if preventive action is not taken; (2) a substantial statistical probability that disease will result from the presence of contaminants in drinking

water; or (3) the threat of substantial or serious harm (such as exposure to carcinogenic agents or other hazardous contaminants).

U.S. House, Rep. No. 1185 at 35-36 (emphasis added).

c. Relevant Case Law

None.

I. FEDERAL WATER POLLUTION CONTROL ACT (As Amended)* (3 U.S.C. §§1251-1376, ELR Stat. 42101-42150.)

A. Summary of Act

The Federal Water Pollution Control Act (FWPCA) is a comprehensive statute intended to clean up the nation's surface waters. The FWPCA sets water quality and use goals and deadlines for achieving them. The Act's environmental goals are:

> (1) elimination of discharges of pollutants into the navigable waters by 1985,
>
> (2) achievement, wherever attainable of "fishable and swimmable" water quality by July 1, 1983, and
>
> (3) prohibition of the discharge of toxic pollutants in toxic quantities.

FWPCA §§101(1), (2) & (3), 33 U.S.C. §1251(1), (2) and (3), ELR Stat. 42105. In addition the Act details six distinct, but interrelated major programs to achieve those goals. The basic programs of the FWPCA are:

> (1) regulation of point source discharges to the nation's surface waters through a combination of nationally uniform, technology-based effluent limitations guidelines and mandatory "national pollutant discharge elimination system" (NPDES) permits incorporating the guidelines and other pollution control and monitoring requirements; the effluent limitations guidelines are to become more stringent in stages, approaching or achieving the goal of zero discharge;
>
> (2) federal requirements for state water quality standards, and the requirement that where necessary to achieve those water quality standards, NPDES permits impose effluent limitations more stringent than the national standards;
>
> (3) federal funding for state and regional water quality planning to control nonpoint source discharges and to coordinate the various water quality improvement programs;
>
> (4) federal funding for the construction of publicly owned [sewage] treatment works (POTWs);

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* For convenience and consistency with the Clean Air Act, the FWPCA is now often referred to as the Clean Water Act, the name of the 1977 Amendments.

(5) federal funding for research on water pollution problems; and

(6) special programs for problems not addressed by the broad schemes, such as pretreatment standards for discharges to POTWs, and provisions establishing liability for spills of oil and hazardous substances.

This paper addresses the heart of the FWPCA--that is, EPA's standard-setting and enforcement functions as they affect industrial discharges.

The FWPCA generally gives water quality and effluent reduction goals priority over economic considerations, but became more sensitive to economics in the 1977 Amendments. In 1972, Congress seemed quite adamant that the effluent reduction and water quality goals it set be achieved by the specified deadlines regardless of the cost to individual firms or of the availability of more cost-effective means of achieving the goals, and without concern that alternative goals might be more consistent with maximizing society's overall welfare. In 1977, Congress apparently recognized that the cost of putting on additional controls beyond the 1977 level would often be very large per unit of additional pollution removed (that marginal benefits of effluent reduction declines with the level of pollution control). Congress allowed EPA to set less stringent second-round effluent limitations for nontoxic pollutants, where the costs of additional control were not justified by the pollution reduction benefits. In spite of these changes, the regulatory framework established by the FWPCA still offers only limited opportunities for economics-based standards.

B. Regulatory Activities

1. Point Source Regulation

Effluent Limitations Guidelines -Section 301

Section 301 requires that point sources discharging to navigable waters meet specified effluent limitations by specified dates. The applicable standards and deadlines are:

> (a) July 1, 1977; for point sources other than POTWs; the "best practicable control technology currently available," commonly abbreviated as "best practicable technology" or "BPT;"
>
> (b) July 1, 1977; for POTWs then in existence; "secondary treatment;"
>
> (c) July 1, 1977; presumably for any point source including POTWs; "any more stringent limitation, including those necessary to meet water quality standards" or other requirements of state law or other federal law;
>
> (d) July 1, 1984 or within three years of the date of promulgation of applicable effluent limitations; for any point source discharging toxic or nonconventional pollutants; "best available technology economically achievable" or "BAT;" and
>
> (e) July 1, 1984 or within three years of promulgation of effluent limitations, but not later than July 1, 1987; for any point source discharging conventional pollutants; "best conventional pollutant control technology" or "BCT."

Effluent limitations guidelines are promulgated by EPA for industry categories and subcategories on the basis of criteria specified in 5304. Once promulgated, the guidelines must be used in NPDES permits for all sources in the category or subcategory, unless the source qualifies for a variance. Thus there are three opportunities to use economic analysis in applying effluent limitations guidelines: (1) in setting the guidelines themselves; (2) in breaking an industry category into subcategories; and (3) in issuing variances. At each of these stages EPA may apply economics differently to each of the five types of effluent standards listed above (a-e).

There are three types of standards of increasing stringency called for under the statute in its present form. First, the Best Practical Technology (BCT) standards that apply to all point sources. They were required under the 1972 Amendments. These Amendments also required a second, more stringent clean-up standard for effluent reduction, Best Available Technology (BAT).

In the 1977 Amendments, Congress split the second stage of effluent reduction requirements into two parts, based on its own analysis of the costs and benefits of going beyond BPT. The best available technology standards would be confined to discharges of toxic and nonconventional pollutants. Discharges of "conventional" pollutants, which appear to have no adverse environmental or health impacts in modest quantities, would be subject to potentially less stringent BCT limits.

BPT Standards - Section 304

BPT standards apply to all point source discharges. They set the ceiling for pollutant discharges-the maximum levels of pollution that may be discharged under any circumstances.

a. Statutory Directive

Section 304(b)(1)(B) directs the Administrator to establish BPT standards considering:

> the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application and shall also take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and other such factors as the Administrator deems appropriate.

The statute thus contemplates some balancing of the costs and "effluent reduction benefits" of controls, and allows subcategorization of industries on the basis of some factors which will affect the relative marginal costs of control (i.e., the age of equip-

ment and facilities and the process involved) at different types of plants within a given industry. There is no mention of variances based on economic or other considerations. The statute does not define “effluent reduction benefits,” arguably leaving open the possibility of cost/benefit analysis by measuring the costs of a possible standard against the environmental benefits. In addition, the closing “and other such factors" language might be construed as opening the door for further economic analysis.

b. Legislative History

Senator Muskie, the key author of the 1972 Amendments to the FWPCA, introduced a report into the record which outlined the BPT requirements as follows:

> The Administrator should establish the range of "best practicable" levels based upon the average of the best existing performance by plants of various sizes, ages, and unit processes within each industrial category. In those industrial categories where present practices are uniformly inadequate, the Administrator should interpret "best practicable" to require higher levels of control than any currently in place if he determines that the technology to achieve those higher levels can be practicably applied.
>
> "Best practicable" can be interpreted as the equivalent of secondary treatment for industry, but this interpretation should not be construed to limit the authority of the Administrator.
>
> The modification of subsection 304(b)(1) is intended to clarify what is meant by the term "practicable". The balancing test between total cost and effluent reduction benefits is intended to limit the application of technology only where the additional degree of effluent reduction is wholly out of proportion to the costs of achieving such marginal level of reduction for any class or category of sources.
>
> The Conferees agreed upon this limited cost-benefit analysis in order to maintain uniformity within a class and category of point sources subject to effluent limitations, and to avoid imposing on the Administrator any requirement to consider the location of sources within a category or to ascertain water quality impact of effluent controls, or to determine the economic impact of controls on any individual plant in a single community.
>
> It is assumed, in any event, that “best practicable technology” will be the minimal level of control imposed on all sources within a category or class during the period subsequent to enactment and prior to July 1, 1977. . . .

Statement of Senator Muskie, reprinted in A Legislative History of the Water Pollution Control Act Amendments of 1972 (hereinafter "1972 Legislative History"), vol. 1, at 169-170, (1973).

The Conference Report also stated:

> The Conferees intend that the Administrator or the State, as the ease may be, will make the determination of the economic impact of an effluent limitation on the basis of classes and categories of point sources, as distinguished from a plant by plant determination.

Conference Report, reprinted in 1972 Legislative History, vol. 1, at 304.

The legislative history thus makes clear that economic considerations were to have a limited role in setting BPT standards for industrial categories or subcategories. EPA was to push the adoption of the best control technology in the industry or the best available elsewhere if it could be practicably applied in that industry, showing a lesser level of control only if the costs were "wholly out of proportion" to the effluent reduction achieved, looking at the category as a whole. This seems to preclude actual cost/benefit analysis. All sources in the category have to comply with the same standard, regardless of variation in their costs of compliance. These costs apparently were to include economic impacts on industries or industry segments, but the Administrator was not to consider the economic impact of controls on an individual plant or community. Nor was he to consider water quality impacts, which would be source-specific. Thus, Congress did not intend EPA to balance costs directly against environmental benefits.

The legislative history quoted gives only limited guidance on s&categorization of industries. It indicates that the Administrator was to group plants on the basis of size, age and production processes, factors which would determine the applicability of a given technology, and the cost.

On the question of variances, the legislative history suggests that they were not to be available--BPT "will be the minimal level of control imposed on all sources within a category". The legislative history also is silent on the "other factors" language.

c. Case Law

In carrying out the "limited" cost/benefit analysis for BPT standards, EPA limited "effluent reduction benefits" to the amount of pollution eliminated. The courts generally have upheld EPA's BPT economic analysis, relying heavily on the statement of Senator Muskie reprinted in 1972 Legislative History at 169-170 and on deference to EPA's interpretation of its statute.

Though not ruling on the adequacy of EPA's economic analysis, in E.I. DuPont de Nemours v. Train, 430 U.S. 112, 7 ELR 20191 (U.S. 1977), the Supreme Court cited with approval the passage in which Senator Muskie explained the nature of the cost-benefit analysis the Act required.

> In presenting the Conference Report to the Senate, Senator Muskie, perhaps the Act's primary author, emphasized the importance of uniformity in setting §301 limitations. He explained that this goal of uniformity required that EPA focus on classes or categories of sources in formulating effluent limitations. Regarding the requirement contained in §301 that plants use the "best practicable control technology" by 1977, he stated:
>
> > "The modification of subsection 304(b)(1) is intended to clarify what is meant by the term 'practicable.' The balancing test between total cost and effluent reduction benefits is intended to limit the application of technology only where the additional degree of effluent reduction is wholly out of proportion to the costs of achieving such marginal level of reduction for any class or category of point sources . . . .

In California & Hawaiian Sugar Company v. Environmental Protection Agency, 553 F.2d 280, 7 ELR 29383 (2d Cir. 1977), the court held that EPA properly limited its effluent reduction benefit analysis to the amount of pollution removed from industry wastewater, ignoring the environmental effects of that removal.

> The EPA, however, need not document specifically the benefits to society from the curtailment of pollutants from a particular point source Congress has established as a national goal the complete elimination of pollutant discharges by 1985 . . . . The EPA must lead industry toward that goal through the 1977 and 1983 standard, and the agency's discretion is necessarily broad.

See also, FMC Corp. v. Train, 539 F.2d 973, 6 ELR 20382 (4th Cir. 1976).

In Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 9 ELR 20284 (D.C. Cir. 1978), the court considered how to take the cost and other factors listed in §304(b)(1)(B) into account in setting BPT limits. It concluded that the Act mandates a comparison of cost and effluent reduction benefits in setting BPT, but leaves to the Administrator's discretion how to take into account the other factors listed at the end of the section (e.g., the age of equipment and facilities involved, ...) (9 ELR at 20289-90).

In Association of Pacific Fisheries v. Environmental Protection Agency, 615 F.2d 794, 10 ELR 20336 (9th Cir. 1980) the court stated:

> We think it plain that, as a general rule, the EPA is required to consider the costs and benefits of a proposed technology in its inquiry to determine the BPT. The Agency has broad discretion in weighing the competing factors, however. . . . When considering different levels of technology, it must be shown that increased costs are wholly disproportionate to potential effluent reduction before the Agency is permitted to rely on a cost-benefit comparison to select a lower level of technology as the BPT. [Citing Muskie's statement, 1972 Legislative History at 170.]

In Environmental Protection Agency v. National Crushed Stone Association, 449 U.S. 64, 10 ELR 20924 (U.S. 1980), the Supreme Court rejected industry claims that the FWPCA required BPT variances for individual sources based on economic hardship. The

Court upheld EPA's "fundamentally different factors" variance. In the course of the opinion, the Court discussed the limits to consideration of economic factors in setting BPT standards. It ruled that the BPT variance it had mandated in DuPont could not be based on economic impacts, but had to be limited to plants "fundamentally different" from those the particular category or subcategory standard is based. Rather, differences are to evaluated in terms of the variables to be taken into account in setting the standards. The court stated that "the statute contemplated regulations that would require a substantial number of point sources with the poorest performance either to conform to BPT standards or to cease production." 10 ELR at 20927. And, "[b]ecause the 1977 limitations were intended to reduce the total pollution produced by an industry, requiring compliance with BPT standards necessarily imposed additional costs on the segment of the industry with the least effective technology. If the statutory goal is to be achieved, these costs must be borne or the point source eliminated." 10 ELR at 20928. In other words, a BPT variance involves in effect, establishment of a new industry subcategory on the basis of a decision that the source seeking the variance does not really belong in the category under which it was regulated.

In Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 9 ELR 20284 (D.C. Cir. 1978), the court held that EPA must consider the total cost of compliance with industry effluent limitations in a variance proceeding, but may issue a variance on the basis of those costs only if they are different in relation to the pollution reduction benefits to be gained, than the cost-benefit ratio for the industry as a whole.

BAT - Section 301

Although in 1977 Congress limited BAT effluent limitation guidelines to toxics, it did not change the 1972 Act provisions telling EPA how to set the standards. The 1977 amendments codified a new strategy for controlling a list of toxic pollutants, outlined in

a consent decree in Natural Resources Defense Council, Inc. v. Train, 6 ELR 20588 (D. D.C. 1976) (referred to as the NRDC decree).

a. Statutory Directive

Congress intended BAT standards to move toward the FWPCA's goal of eliminating discharges of pollutants. Section 301(b)(2)(A) states the BAT requirement as follows:

> . . . for pollutants identified in subparagraph (c) [the NRDC consent decree pollutants], (D) [pollutants listed under §307(a)], and (F) [pollutants which are neither toxic nor conventional, that is, nonconventional pollutants] of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him . . . that such elimination is technologically and economically achievable for a category or class of point sources . . .

The BAT criteria are further elucidated in §304(b)(2)(B):

> Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

Unlike the situation with BPT, the Act provides for changes in BAT requirements for individual sources. Section 301(c) authorizes economic impact variances from BAT standards.

> (c) The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified

> requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

Section 301(g) provides for modifications of the technology required by BAT standards for individual point sources where those standards are not necessary to achieve the Act's 1983 goal of "fishable/swimmable" waters.

> (g)(1) The Administrator, with the concurrence of the State, shall modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge of any pollutant (other than pollutants identified pursuant to section 304(a)(4) of this Act, and the thermal component of discharges) from any point source upon a showing by the owner or operator of such point source satisfactory to the Administrator that-
>
> (A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) [BPT] or (C) of this section, whichever is applicable;
>
> (B) such modified requirements will not result in any additional requirements on any other point or non-point source; and
>
> (C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

However, §301(l) bars changing BAT provisions for toxic pollutants, which are under §307(a)(1), a list which includes the NRDC decree pollutants.

> (1) The Administrator may not modify any requirement of this section as it applies to any specific pollutant which is on the toxic pollutant list under section 307(a)(1) of this Act.

The statute indicates that "economic achievability" is the key economic variable in calculating the BAT standards themselves. Section 301 does not specify what the term means. However, it does suggest that economic impacts of BAT may be more severe than those of BPT by requiring that BAT standards result in at least "reasonable further

progress" toward the goal of zero discharge. Section 304(b)(2)(B) uses much of the same language as §304(b)(1)(B)'s criteria for BPT, but has two significant differences relating to economic analysis. The BAT provision omits the requirement that the costs be considered in relation to the effluent reduction benefits, and includes costs among the factors also to be taken into account.

The statute provides the same basis for categorizing sources under BAT as under BPT. It does not specify, however, whether the same categories must be used for BPT and BAT.

On the other hand, the FWPCA provides explicit, though limited variances from and modifications to BAT standards. Section 301(c) allows EPA to issue economic hardship variances so long as the source does the best pollution control job within its economic capability and makes reasonable further progress toward zero discharge. Section 301(g) allows EPA to modify BAT requirements for nonconventional pollutants where the source complies with BPT and the less stringent standard will not cause water quality standard violations or threats to public health or environmental values. Section 301(1) states that EPA may not modify any 5301 requirement as it applies to toxic pollutants listed under §307(a)(1). It is not clear on the face of the statute whether §301(l) applies to §301(c) variances as well as §301(g) modifications.

b. Legislative History

The legislative history of the 1977 Amendments does not address the role of economics in calculating BAT standards or in categorizing industrial sources for standard-setting.

The history of the 1972 Amendments limits the scope of economic analysis in standard-setting. It appears that EPA is to push technology as far as possible toward zero discharge so long as the overall economic impacts are not unreasonable. Reasonableness is to be determined on the basis of what is possible rather than through a

balancing of costs and benefits.

> In making the determination of "best available" for a category or class, the Administrator is expected to apply the same principles involved in making the determination of "best practicable" (outlined above), except as to cost-benefit analysis. Also, rather than establishing the range of levels in reference to the average of the best performers in an industrial category, the range should, at a minimum, be established with reference to the best performer in any industrial category.
>
> The distinction between "best practicable" and "best available" is intended to reflect the need to press toward increasingly higher levels of control in six-year stages. Through the research and development of new processes, modifications, replacement of obsolete plans and processes, and other improvements in technology, it is anticipated that it should be possible, taking into account the cost of controls, to achieve by 1983 levels of control which approach and achieve the elimination of the discharge of pollutants.
>
> As to the cost of "best available" technology, the Conferees agreed upon the language of the Senate bill in Section 304(b)(2). While cost should be a factor in the Administrator's judgment, no balancing test will be required. The Administrator will be bound by a test of reasonableness. In this case, the reasonableness of which is "economically achievable" should reflect an evaluation of what needs to be done to move toward the elimination of the discharge of pollutants and what is achievable through the application of available technology--without regard to cost.

Statement of Senator Muskie, reprinted in 1972 Legislative History, vol. 1, at 170.

The legislative history confirms that variances from and modifications of BAT standards are not available for toxic pollutants. Thus the economic hardship relief prescribed in 1972 is available only for discharges of nonconventional, conventional (to the extent covered by BAT) and heat pollution.

> Due to the nature of toxic pollutants, those identified for regulation will not be subject to waivers from or modification of the requirements prescribed under this section, specifically,. neither section 301(c) waivers based on economic capability of the discharger nor 301(g) waivers based on water quality considerations shall be available.

Statement of Cong. Roberts, reprinted in 1972 Legislative History, vol. 1, at 328-9.

c. Case Law

In Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 9 ELR 20284 (D.C. Cir. 1978), the court concluded that Congress' elimination of the cost-effluent reduction benefit balancing language in the BAT factors in §304 and its inclusion of cost as a factor "to be taken into account" left to the agency's discretion exactly what weight to give cost in BAT (while mandating weighing costs against effluent reduction benefits in BPT).

> Based on our examination of the statutory language and the legislative history, we conclude that Congress mandated a particular structure and weight for the 1977 comparison factors, that is to say, a "limited" balancing test. In contrast, Congress did not mandate any particular structure or weight for the many consideration factors. Rather, it left EPA with discretion to decide how to account for the consideration factors, and how much weight to give each factor. In response to these divergent congressional approaches, we conclude that, on the one hand, we should examine EPA's treatment of cost and benefit under the 1977 standard to assure that the Agency complied with Congress' "limited" balancing directive. On the other hand, our scrutiny of the Agency's treatment of the several consideration factors seeks to assure that the Agency informed itself as to their magnitude, and reached its own express and considered conclusion about their bearing. More particularly, we do not believe that EPA is required to use any specific structure such as a balancing test in assessing the consideration factors, nor do we believe that EPA is required to give each consideration factor any specific weight. (9 ELR at 20299.)

See also, American Paper Institute v. Train, 543 F.2d 328, 6 ELR 20729 (D.C. Cir. 1976) (cost-benefit balancing required in BPT standards, not in BAT); Accord, American Frozen Food Institute v. Train, 539 F.2d 107, 6 ELR 20485 (D.C. Cir. 1976); but see BASF Wyandotte Corp. v. Costle, 598 F.2d 637, 9 ELR 20609 (1st Cir. 1979) (EPA's duty to consider the cost-benefit balance is not significantly different from its duty to take into account the listed factors).

BCT standards - Section 304

a. Statutory Directive

Section 304(b)(4)(B) states that:

> [f]actors relating to the assessment of best conventional pollutant control technology (including measures and practices) shall include consideration of the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived, and the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources, and shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

This provision appears to require two tests, a cost comparison of POTWs and an industry cost-effectiveness test, the precise nature of which is not readily apparent on the face of the statute, but which has been considered in a court decision discussed below.

b. Legislative History

Both the Senate and House legislative histories provide some guidance on the consideration of economic factors in setting BCT standards, and indicate that Congress did not contemplate the use by EPA of a complicated cost/benefit analysis in setting BCT standards. In the Senate, Senator Muskie emphasized the POTW comparison test, but suggested that the Administrator should also compare cost-effectiveness.

> The conferees did not expect this review [of BAT standards to see where BCT should be set at a lower level] to be exhaustive or extensive. EPA's resources are limited. To direct maximum resources to removal of toxics, pretreatment, enforcement, and proper implementation of the construction grant program, this is intended to be a very limited review. The data on which these best available technology guidelines are based already exists. No new information need be developed. The Administrator must determine whether or not the cost of achieving reductions of conventional effluent bears a reasonable relationship to the amount of effluent reduction achieved. In making this determination, the Administrator is to compare the costs of industrial effluent reduction to the cost of municipal waste treatment.
>
> The Administrator may also evaluate the effluent reduction cost/effluent reduction benefit on other cost bases including comparison with other industries. The Administrator should consider costs of process change as well as end-of-pipe

> treatment. Where the former is more economical, process change, not treatment, should be the basis for both the effluent limit and the cost comparison.
>
> Best conventional pollution technology effluent guidelines are, from a regulatory standpoint, in most respects identical to best available technology except for the cost test in establishing effluent guidelines. The dates are identical, the procedure for 5-year review and update is identical, and the requirement that the Administrator consider process change as well as treatment techniques in establishing the guidelines is identical. Best conventional technology-based effluent limitations are not subject to a modification on the basis of a plant-by-plant test of economic feasibility (301(c)) or receiving water quality (301(g)). (Emphasis added).

Statement of Sen. Muskie, reprinted in Legislative History of the Clean Water Act of 1977, a continuation of the Legislative History of the Federal Water Pollution Control Act (hereinafter cited as 1977 Legislative History), vol. 3, at 458 (1978).

In the House, Congressman Roberts implied that the POTW comparison alone was an adequate test.

> In assessing the need for BCT, the Administrator is required to consider the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived. Essentially, we are talking about removing additional "cheap pounds" of conventional pollutants. Stated another way, BCT imposes a level of control technology which anticipates and accepts the possibility of an increase in stringency beyond BPT, but not resulting in increased costs beyond the "knee of the curve," the take-off point where incremental costs begin to exceed incremental benefits.
>
> Comparison of the costs and level of reduction of such pollutants from the discharge of publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial point sources is appropriate in making these determinations of reasonableness.
>
> Because of the greater-than-anticipated results obtained under 1977 BPT requirements, the appropriate starting point should be BPT as currently promulgated. Guidelines have been promulgated, industry has substantially complied at costs regarded justifiable in terms of benefits. Results are being achieved and water quality improved. It is therefore not the intent of this provision to launch an unnecessary exercise in development of BAT as a basis from which to scale down to BCT. The Administrator should first

> examine the adequacy of BPT in terms of the criteria herein established before making any determination that a higher level of treatment be required. (Emphasis added.)

Statement of Cong. Roberts, reprinted in 1977 Legislative History, vol. 3, at 330.

c. Case Law

The leading case on BCT is American Paper Institute v. Environmental Protection Agency 650 F.2d 954, 11 ELR 20865 (4th Cir. 1981). The court ruled that the BCT cost-reasonableness test must have two parts, both as industry cost-effectiveness test and as POTW comparison test. In other words, in order to satisfy the statute, a candidate BCT technology had to be no more expensive than equivalent treatment in a POTW and to achieve a reasonable additional pollution reduction per dollar spent. It based its decision on the language of the statute, finding the legislative history on this issue of "minimum probative value because of the conflicts contained therein." Though ruling that EPA erred in not using an industry cost-effectiveness test, the court upheld the agency's POTW-comparison methodology. The EPA test used the marginal cost of going from secondary treatment (the POTW equivalent of BPT) to advanced secondary treatment as the POTW benchmark. The court held that the statute did not specify a precise methodology and that EPA was not arbitrary and capricious in choosing this test over the industry-recommended alternative based on average cost and technologies other than advanced secondary which were closer to secondary treatment in cost.

While requiring an industry cost-effectiveness test, the court did not specify the test methodology. EPA's task is to select a standard that, for the industry segment covered, entails a reasonable amount of effluent reduction per dollar spent. The only indication in the opinion of what would be reasonable is a reference to the statement in the legislative history that BCT should not go beyond the "knee in the marginal cost curve" see statement of Cong. Roberts, P. 15, supra. This is a reference to the fact that as one charts the marginal benefits of increasing levels of pollution control for an

industry, at some point, usually at a relatively high level of control, the effluent reduction benefits of each additional unit of expenditure decrease rapidly. However, finding the precise "knee" of the marginal cost curves for hundreds of industries is an enormous undertaking. A suggested alternative might be the more imprecise approach of requiring the marginal cost of BCT to be no more than a specified multiple of BPT marginal cost (e.g., no more than 1.5 times greater).

2. Standards of Performance for New Sources - Section 306

The effluent limitations discussed thus far concern existing facilities. Section 306 mandates promulgation of stringent limits for new sources as well.

a. Statutory Directive

Section 306 directs EPA to promulgate "national standards of performance" for new sources in specified industry categories (§306(b)(1)(A)) and other categories selected by the agency. Thus, new sources in each category must comply with the new source standards instead of BPT, BCT, or BAT. A standard of performance is to be

> a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

§306(a)(1). Section 306(b)(1)(B) requires the Administrator to consider the "cost of achieving such effluent reduction", non-water quality environmental impacts and energy issues in promulgating or revising the standards of performance.

b. Legislative History

Section 306 was added in the 1972 amendments and was not changed in 1977. 1977 Legislative History, vol. 3, at 116-18. The legislative history of the 1972 amendments indicates that the performance standards were to be more stringent than BAT in that

they could be based on process changes as well as end-of-pipe technology, and that the cost test used "would be considerably more restrictive than the test which would be applied to 'best available technology because pollution control alternatives are available to a new source which are not available to existing sources," While the Administrator was to consider process changes in designing effluent limits, he was not to specify control technologies or protection processes.

> This does not mean that the Administrator is to determine the kind of production processes or the technology to be used by a new source. It does mean that the Administrator is required to establish standards of performance which reflect the levels of control achievable through improved production process, end of process technique, etc., leaving to the individual new source the responsibility to achieve that level of performance by application of whatever techniques determined available and desirable to that individual owner or operator. Senate consideration of Conference Committee Report, reprinted in 1972 Legislative History, vol. 1, at 172-3.

c. Case Law

The courts generally have found the scope of economic analysis to be limited under §306. In CPC International, Inc. v. Train, 540 F.2d 1329, 6 ELR 20728, (8th Cir. 1976); cert. den'd 430 U.S. 966, the Eighth Circuit ruled that §306 does not require cost-benefit analysis. The court held that a thorough study of costs and a decision that the industry could reasonably bear these costs was sufficient. While this case does not address the issue of whether EPA could use cost-benefit analysis "if it wanted to, it does indicate that Congress directed EPA to rely on another sort of analyses. The court also ruled that the standards were to specify numerical effluent limits, not control technology. In E.I. DuPont de Nemours & Co. v. Train, 430 U.S. 112, 7 ELR 20191, (U.S. 1977) the Supreme Court ruled that there may be no variances from §306 standards.

3. Water-Quality-Based Effluent Limitations - Sections 301, 302

a. Statutory Directive

The 1972 Amendments to the FWPCA included two provisions directing EPA to impose effluent limits more stringent than the technology-based BPT, BCT, BAT or new source standards. §301(b)(1)(C) relating to the 1977 standards and §302 relating to 1983 standards. Neither provision was amended in 1977. (Clean Water Act, showing changes made by the 1977 Amendments, reprinted in 1977 Legislative History, vol. 3, at 100, 105.)

Section 301(b)(1)(C) requires compliance by July 1, 1977 with "any more stringent limitation, including those necessary to meet water quality standards..., established pursuant to any state law...." Section 303(d) implements the §301(b)(1)(C) directive by ordering states to identify those waters which will not be brought into compliance with applicable state water quality standards through application of BPT. The state then is to establish a priority ranking of such waters and estimate the "total maximum daily load..." at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. Neither §301(b)(1)(C) nor §303(d) mentions economic considerations, suggesting that 1977 limits were to be tight enough to achieve applicable water quality standards regardless of cost or economic impact. Economic impacts can be considered, however, in setting water quality standards.

Section 302 mandates that if the Administrator determines that application of BCT or BAT to one or more sources discharging to a specified stream segment will allow sufficient pollution to "interfere with" achievement of the § 101 (a)(2) goal of so-called "fishable, swimmable" water quality, he or she shall establish more stringent "water quality related effluent limitations" consistent with that goal. Section 302(b) requires notice and a hearing on such limits and requires the Administrator to

> determine the relationship of the economic and social costs of achieving any such limitation or limitations, including any economic or social dislocation in the affected community or communities, to the social and economic benefits to be obtained (including the attainment of the objective of this Act) and to determine whether or not such effluent limitations can be implemented with available technology or other alternative control strategies.

If any person "affected by such limitation" shows that "there is no reasonable relationship" between the economic and social costs and benefits, the Administrator is to modify the limit as it applies to that person. A showing of technological infeasibility is not enough to qualify for a modification; the reasonable relationship test must be met in any event. Thus both in setting §302 limits and in granting waivers for individual sources, the Administrator is to balance overall costs and benefits.

b. Legislative History

The legislative history of §301(b)(1)(C) does not discuss economic issues, but strongly suggests that the only matter to be considered is whether BPT standards will satisfy water quality standards or other applicable state law requirements. The conference committee reports are not helpful. See, 1972 Legislative History vol. 1, at 170, 303. The Senate committee report states:

> In other words, whenever the Administrator determines that application of the best practicable technology requirements of Phase I will not provide for implementation of existing water quality standards for interstate or intrastate streams, he must tighten the requirements against a source or group of sources.

1972 Legislative History, vol. 2, at 1462. In the House presentation of the bill that included the water quality standards provision eventually adopted, Rep. Blatnik stated that water-quality-based effluent limits alone could not always attain water quality standards due to nonpoint source pollution. 1972 Legislative History, vol. 2, at 793.

The legislative history does elaborate on the balancing required in setting and modifying §302 effluent limitations, however. Section 302 came from the Senate bill (see 1972 Legislative History, vol. 1, at 171, 304-5). The Senate committee report

directs the Administrator to consider both measurable economic costs and intangible environmental benefits, though acknowledging that this would be "difficult." 1972 Legislative History, vol. 2, at 1465. The report goes on to provide the following guidance:

> The Committee recognizes that no mathematical balance can be achieved in considering relative costs and benefits nor would any precise formula be desirable, but in each case the Administrator or the State will be able to determine whether there is any reasonable connection at all between the costs which a particular effluent limitation would impose and any benefits (including the attainment of national water quality) which might be derived.

1972 Legislative History, vol. 2, at 1466.

c. Case Law

The courts have not had much opportunity to apply §§301(b)(1)(C) and 302. Two reported cases dealing with the sections limited economic analysis in setting water-quality-based effluent limits to the §302 limitations.

In United States Steel Corp. v. Train, 556 F.2d 822, 7 ELR 20419 (7th Cir. 1977), the court ruled that it lacked authority to hear a challenge to EPA-approved state water quality standards in an action challenging effluent limitations based on those standards under §301(b)(1)(C). (See also, Big Fork Mining Co. v. Tennessee. Water Quality Control Board, 620 S.W.2d 515 (Term. Ct. App. 1981) in which the court upheld the Boards denial of an NPDES permit on the basis of inconsistency with the antidegradation provision in the state water quality standards.) The court in U.S. Steel noted that "the Administrator was required by the Act to include in the permit any discharge limits necessary to meet" state water quality standards. It then ruled that under §301(b)(1)(C), EPA must include effluent limits based on state §303(d) waste load allocations in an NPDES permit without inquiring into whether these limits were necessary to attain the water quality standards, due to the state's authority under §510 to impose requirements more stringent than federal standards.

In Homestake Mining Co. v. United States, 477 F. Supp. 1279, 10 ELR 20072 (D.S.D. 1979) the court ruled that §301(b)(1)(C) and §302 are separate provisions, rejecting plaintiff's claim that a §302 cost-benefit balancing hearing was required before a water quality based standard could be imposed under §301(b)(1)(C) and §303(d). The court also ruled that a state could impose effluent standards stricter than BAT under its §510 authority without a §302 hearing.

4. Water Quality Standards - Section 303

a. Statutory Directive

Section 303 expands the federal mandate for state water quality standards. Prior federal law (the FWPCA as amended by the Water Quality Act of 1965, Pub. L. No. 89-234, 79 Stat. 903 (1965)) required states to develop water quality standards for interstate waters, taking into account "the use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other legitimate uses." Water Quality Act of 1965, 95. The 1972 amendments continued these standards in effect and required states to develop similar standards for intrastate waters. Where states failed to develop adequate standards, EPA is authorized to promulgate substitute standards using the same guidelines. FWPCA §303(a)(1), (b). New water quality standards are, like their predecessors, to take into account the use and value of the waters for public water supplies, etc.. FWPCA §303(c)(2). They are also to "protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter." Id. Water quality standards under both the 1965 and 1972 amendments were to consist of statements of use and water quality criteria consistent with the designated uses. Section 304(a)(1) of the FWPCA directs the Administrator to develop and publish *'criteria for water quality accurately reflecting the latest scientific knowledge." These criteria are to guide the states in setting their water quality criteria and to be used by EPA in reviewing proposed state standards.

Under §303(e) each state must submit "continuing planning process" plans for approval by EPA. Plans prepared under the process must include effluent limitations at least as stringent as those set by EPA, schedules of compliance, areawide waste treatment management plans, daily load limits, and adequate implementation controls for the disposition of residual wastes and an inventory and ranking of needs for construction of POTWs.

The statute does not give clear guidance on the consideration of economic factors in state promulgation or EPA review of water quality standards. States clearly are authorized to consider economics in setting standards, at least to the extent that a state could classify for industrial use a stream carrying heavy industrial wasteloads. Such classification would force application of effluent limits only as stringent as BPT in order to attain the water quality standards (at least for conventional pollutants).

b. Legislative History

Section 303 was taken from the House bill with changes consisting principally of the addition of §303(d). 1972 Legislative History, vol. 1, at 306. The legislative history of §303 does not discuss how costs may be considered by states in setting or by EPA in approving water quality standards, or continuing process plans. See, e.g., House debate reprinted in 1972 Legislative History, vol. 2, at 791-194.

c. Case Law

A number of judicial decisions have interpreted 5303 and have not required EPA to consider economic factors in approving or promulgating water quality standards or in setting the criteria for states to promulgate water quality standards. The courts appear to give EPA broad discretion in applying the general directives of §303. (See, Environmental Defense Fund v. Costle, 657 F.2d 275, 11 ELR 20459, (D.C. Cir. 1981).) In Mississippi Commission on Natural Resources v. Costle, 625 F.2d 1269, 10 ELR 20931

(5th Cir. 1980), the Fifth Circuit ruled that in disapproving a state's water quality standard for dissolved oxygen, EPA need not consider economic factors in setting a federal water quality standard for dissolved oxygen for the state after disapproving the state's own standard. The court did appear to accept EPA's conclusion that economic factors should be considered in designating uses for water bodies identified by the state that do not meet the water quality standards.

In Homestake Mining Company v. United States, 477 F. Supp. 1279, 10 ELR 20072 (D.S.D. 1979) the Court upheld the authority of states and EPA to approve state effluent limitations more stringent than the federal limits in order to meet water quality standards, in effect forcing industry to create more effective pollution control technology. In addition, in Homestake, the court ruled that states may set water quality standards under §303 without resorting to the cost-benefit analysis required in 3302.

5. Pretreatment Standards - Section 307(b)

a. Statutory Directive

Section 307(b) directs the Administrator to promulgate standards for discharges from new and existing sources to POTWs, governing pollutants which would pass through the plant untreated or would interfere with its operation. The standards for existing sources are to "prevent the discharge of any pollutant through treatment works. . .which are publicly owned, which pollutant interferes with, passes through, or otherwise is incompatible with such works." §307(b)(1). New sources discharging to POTWs are to be governed by a somewhat differently worded standard: "prevent the discharge of any pollutant into such treatment works, which pollutant may interfere with, pass through, or otherwise be incompatible with such works." §306(c) (emphasis added). The statute does not discuss consideration of economic variables in setting pretreatment standards.

b. Legislative History

The legislative history is silent on consideration of economic variables- in the pretreatment program. See, e.g., Conference Report reprinted in 1972 Legislative History, vol. 1, at 313-14; joint explanatory statement reprinted in 1977 Legislative History, vol. 3, at 270-72.

c. Case Law

None identified.

6. Enforcement - Section 309

The system of point source regulation established in the Federal Water Pollution Control Act in 1972 was designed to confront individual sources of pollution with clear, enforceable limits on the amount and type of wastewater they could discharge to the nation's waters. Congress also provided an imposing array of enforcement tools for EPA to use in correcting noncompliance with the Act's point source effluent control requirements. This section examines the potential for incorporating economic analysis into enforcement activities under the FWPCA in one of three ways: (1) using prosecutorial discretion to pursue enforcement priorities to obtain the greatest environmental benefit for each enforcement dollar spent, (2) using prosecutorial discretion of choice of sanctions to relieve individual violators of severe economic impacts of compliance, and (3) calculating civil penalties to create economic incentives for compliance. The enforcement provisions of the Act are tough, and incorporate only a limited degree of flexibility which the agency could use to give some play to factors such as source-specific economic impacts or fairness which are not included in the rigid effluent limitation/NPDES permit scheme. On the other hand, this flexibility is limited, for the agency has a duty to enforce the law and may not use its prosecutorial discretion to rewrite the regulatory equation prescribed by Congress. Another aspect of the

enforcement program of the FWPCA which opens it to economic considerations is the civil penalty provision. The agency may use this penalty authority to attempt to redress any competitive imbalance caused by the economically beneficial noncompliance of some sources in an industry.

a. Statutory Directives

The FWPCA sets out most of its enforcement provisions in §309. Section 309 provides EPA with three basic enforcement tools, administrative orders, civil suits, and criminal actions. Section 309(a)(3) appears to require the Administrator to either issue an administrative order or file a civil suit upon finding a violation of §§301, 302, 306, 308, 318, or 405 of the Act or of any condition of an NPDES or §404 permit.

> Whenever on the basis of any information available to him the Administrator finds that any person is in violation of [specified sections]..., he shall issue an order...or he shall bring a civil action....

The only exception is in cases where the violation is of an NPDES permit issued by a state under an EPA-approved program. In such cases, the Administrator has the option of notifying the state of the violation. If the state does not commence an enforcement action within 30 days, EPA must act. Section 309(a)(2) further requires that if the Administrator finds that violations in a state are so widespread as to appear to result from a failure of enforcement, he must notify the state, which has 30 days to correct the failure, after which EPA will assume enforcement responsibility in that state.

If the Administrator chooses to issue an administrative enforcement order, he must direct the violator to come into compliance and set a schedule. The statute constrains the agency in setting compliance schedules. The most important constraint is the compliance deadlines for each type of effluent limitation. Section 309(a)(5) prescribes the conditions under which compliance orders may extend the date for compliance beyond the basic statutory limit (e.g., beyond 1977 for BPT). Section 309(a)(5)(A) sets a 30-day limit on compliance orders for violations of interim compliance

schedules or operation and maintenance requirements, and "a reasonable time" for violations of final deadlines, "taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements." Sections 309(a)(5)(B) and (6) allowed compliance schedules to run beyond the 1977 deadline, but only until dates which are now past, so these provisions now appear inapplicable.

The remedies available to EPA through civil actions are varied and powerful. The agency is authorized by §309(b) to seek "appropriate relief," including temporary or permanent injunctions. Section 309(d) makes those violating §§301, 302, 306, 307 or 308, 318, or 405 of the Act or permits issued under §§402 or 404 or a §309 order, liable for civil penalties "not to exceed $10,000 per day of such violation."

Section 309(c)(1) makes willful or negligent violations of §§301, 302, 307, 308 or permit conditions liable for criminal finds of $2,500 to $25,000 per day of violation and jail terms of up to one year, or both. Knowing false reporting is made subject to fines of up to $10,000 and/or jail terms of up to 6 months by §309(c)(2). In addition, §508(a) of the Act prohibits federal agencies from entering into procurement contracts with companies convicted of offenses under §309(c).

The statute appears to offer at least limited potential for applying the three types of economic considerations in the enforcement process. First, §309(a) places some constraints on the use of prosecutorial discretion. That is, once the Administrator finds that a violation has occurred, he or she must either issue an order or file a lawsuit. This would not seem to preclude concentrating monitoring resources on those categories of sources where enforcement seemed to have the most to gain in environmental benefits. However, since the FWPCA enforcement scheme relies heavily on source self-monitoring, the agency's monitoring flexibility will be limited. The agency could choose the type of enforcement action based on an overall priority system.

The prosecutorial discretion and choice of sanctions allowed under the FWPCA might be used to soften the economic impact of the rigid industry-wide effluent

limitations on individual facilities as well. However, the clearly stated intent of Congress that an individual source's financial inability to comply may not be the basis for an exemption from the generally applicable effluent limitations appears to limit the extent of such actions. Moreover, the extent to which the agency can allow compliance schedules to extend beyond the statutory compliance deadlines would appear to be constrained by the fact that the conditions specified by Congress in §309(a)(5) for extensions beyond the 1977 BPT deadline did not include economic hardship.

The statute provides no guidance on the question of using the civil penalty authority of 5309 to create an economic incentive for compliance. It does not specify criteria for setting penalty amounts.

b. Legislative History

The bulk of 5309 was enacted in the 1972 Amendments to the FWPCA. The principal change made in 1977 was the addition of §309(a)(5) and (6) providing for compliance orders with deadlines later than the 1977 BPT deadline.

The legislative history of the 1972 Amendments supports the notion that the Administrator has little discretion once he finds that the Act has been violated. The Conference Report placed in the record by Senator Muskie traces the origin of §309 and states that the Administrator's enforcment duties start even before a violation is confirmed:

> In section 309, the Senate receded to the House in not making civil enforcement mandatory upon the Administrator despite the feeling of the Senate Conferees that, on its own merits, mandatory civil enforcement is far preferable to a discretionary responsibility. It is important to note, however, that the provisions requiring, the Administrator to issue an abatement order whenever there is a violation were mandatory in both the Senate bill and the House amendment, and the Conference agreement contemplates that the Administrator's duty to issue an abatement order remains a mandatory one. The duty to issue such an order, under section 309(a)(3) arises whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of enumerated regulatory requirements of the Act.

> It is expected, of course, that upon receipt of information giving the Administrator reason to believe that a violation has occurred, he has an affirmative duty to take the steps necessary to determine whether a violation has occurred, including such investigations as may be necessary, and to make his finding as expeditiously as practicable.
>
> Statement of Senator Muskie, reprinted in 1972 Legislative History, vol. 1, at 174 (1973).

The history of the House bill, which was adopted by the Conference Committee, presents a somewhat less confining picture of the Administrator's discretion, but does indicate that the -Administrator must take enforcement action for all violations which are not the subject of state action. The House Committee Report states that the Administrator, upon finding a violation, "may take any of the following enforcement actions: (1) he shall issue an order...; (2) he shall notify the person in alleged violation... . If beyond the 30th day after the Administrator's notification the State has not commenced appropriate enforcement action, the Administrator shall issue an order requiring such person to comply...; or (3) he shall bring a civil action; or (4) he shall cause to be instituted criminal proceedings." House Public Works Committee Report, reprinted in 1972 Legislative History, vol. 1, at 801-2 (1973). While the use of "may" suggests discretion, it would appear that the discretion is limited to choosing among the four alternatives.

It appears from the legislative history of S309 that the Administrator's prosecutorial discretion is limited to the choice of actions to take once he identifies a violation. The history does not discuss whether this discretion may be used either to carry out an enforcement strategy or to relieve economic stress on individual firms. The only guidance, and it is ambiguous, is that EPA should defer to state actions and does not have to file lawsuits whenever violations arise.

Turning to the history as it relates to choosing the compliance schedule and other remedies sought, there is little additional guidance relevant to this inquiry. In presenting the 1977 Conference Report on the Senate floor, Senator Muskie stated:

> These remedies [§309(a)(5) and (6)] are all at the direction of the Administrator. No discharger has any right to compel the Administrator to provide a particular remedy.... It should be noted that the extensions in administrative orders in the new section 309(a)(5)(B)...are available only to dischargers that have acted in good faith.
>
> Statement of Senator Muskie, reprinted in 1977 Legislative History, vol. 3, at 464, 465 (1978).

In presenting the Conference Report on the House floor, Rep. Roberts described the new extension provisions and added a comment which suggests that EPA had some discretion to allow compliance extensions beyond statutory deadlines where 309(a)(5) and (6) were not applicable in order to alleviate industry-wide economic hardship:

> Throughout the conference, the House conferees were very aware of the current capital problems of the American steel industry.... In many instances...many individual facilities negotiated long term settlements that carry past July 1, 1977, and in some instances past April 1, 1979. It is the firm intent of the conferees that nothing in this legislation invalidates or in any way affects such orders, decrees, settlements or other agreements in existence prior to the enactment of this language.
>
> Statement of Rep. Roberts, reprinted in 1977 Legislative History, vol. 3, at 403 (1978).

The legislative history touches on the question of using §309 civil penalties to offset the economic advantage of delaying compliance. The Senate bill included a noncompliance fee similar to that enacted as §120 of the Clean Air Act, but the Conference Committee deleted the provision. The House and Senate histories reach opposite conclusions as to the significance of the deletion. Rep. Roberts stated in the House:

> Section 309(d) of the Federal Water Pollution Control Act places broad discretionary power on the Administrator to subject persons to civil penalties for violating permits issued pursuant to section 402 as well as for violations of provisions of the Act. However, nowhere in the law was it contemplated that civil penalties were to be levied by EPA based upon the theory of recovery from a discharger of all economic gain achieved by noncompliance. Nothing contained in this legislation would change this. In fact, a provision to authorize noncompliance fees was included in the Senate version of the

> Clean Water Act of 1977, but was specifically rejected in Conference.
>
> Statement of Rep. Roberts, reprinted in 1977 Legislative History, vol. 3, at 366 (1978).

In the Senate, Senator Muskie concluded that:

> The conference committee dropped this provision as unnecessary at this time for two reasons. First, although there are well over a thousand major sources of air pollution that will not be in compliance with Clean Air Act requirements on July 1, 1979, there are only a few hundred major industrial sources of water pollution that are expected to be in non-compliance with the Federal Water Pollution Control Act requirements by that date. This relatively good compliance record appears to make the addition of a new enforcement tool unnecessary at this time. Second, the Agency's current enforcement policy is to seek court imposed penalties for non-compliance with Clean Water Act requirements in amounts commensurate with economic benefit of delayed compliance, among other factors.
>
> This policy embodies congressional intent on the criteria that should be considered by courts in imposing civil penalties under existing provisions of the Act....
>
> The deletion of this provision is in no way intended to affect the Agency's current enforcement strategy.
>
> Statement of Senator Muskie, reprinted in 1977 Legislative History, vol. 3, at 476-7 (1978).

c. Case Law

The courts have split on whether EPA has a nondiscretionary duty to take an enforcement action upon discovering a violation of the FWPCA. In Sierra Club v. Train, 557 F.2d 485, 7 ELR 20670 (5th Cir. 1977), the court ruled that enforcement is discretionary. In State Water Control Board v. Train, 559 F.2d 921, 7 ELR 20571 (4th Cir. 1977), the court held that EPA's prosecutorial discretion is sufficient to allow the agency not to bring an enforcement action against a municipality whose noncompliance is due to EPA's failure to approve an FWPCA construction grant.

On the other side of the ledger, two district courts have ruled that EPA has a non-discretionary duty to enforce against violators. See, People ex rel Scott v. Hoffmann, 425 F. Sup. 71, 7 ELR 20287 (S.D. Ill. 1977) and South Carolina Wildlife Federation v.

Alexander, 457 F. Supp. 118, 8 ELR 20757 (D.S.C. 1978). In the latter case, the district judge expressly rejected the Fifth Circuit's reasoning in Sierra Club v. Train, finding the statement by Senator Muskie quoted on page 29 above dispositive and noting that the appeals court had ignored this key part of the legislative history.

The breadth of the agency's discretion in choosing a compliance tool (order or suit) was considered in United States v. Earth Sciences, Inc., 599 F.2d 368, 9 ELR 20542 (10th Cir. 1979). The court ruled that §309 gives EPA a choice of order or lawsuit and that the alternatives are not mutually exclusive.

At least one court has construed EPA's flexibility in fashioning compliance orders under §309. In United States v. Homestake Mining Co., 595 F.2d 421, 9 ELR 20245 (8th Cir. 1979), the court ruled that EPA properly limited §309(a)(5)(B) extensions to permits requiring BPT compliance (not compliance more stringent than water quality based limits).

With regard to the courts' latitude in fashioning, remedies in FWPCA enforcement cases, it is established law that, within the statutory limits, the remedies are within the judges' discretion. In Weinberger v. Romero-Barcelo, 465 U.S. 305, 12 ELR 20538 (U.S. 1982), the Supreme Court held that injunctive relief under the FWPCA falls under the court's equitable jurisdiction and that the court is not required to immediately restrain an ongoing violation where the circumstances warrant. The case involved a discharge without an NPDES permit which had no harmful water quality effects. As to penalties, it is established that the penalty amount, within the statutory limits, fall within the court's discretion. See, e.g., U.S. v. Velsicol Corp., 8 ELR 20745 (W.D. Tenn. 1978).

In the only case in which EPA's policy of seeking penalties based on the economic benefit of noncompliance, the Ohio Supreme Court has upheld a trial court decision to apply the policy in state NPDES enforcement actions. See, State ex rel Brown v. Dayton Malleable Inc., 438 N.E.2d 120, 12 ELR 21146 (Ohio 1982).

7. NPDES Permits - Section 402

The NPDES permit program (§402) is a critical component of the FWPCA's scheme for point source regulation. Discharges of pollutants to the nation's waters without permits are illegal (§§301, 402(k)). The permit specifies what may be discharges, and sets out a schedlule of compliance and monitoring and reporting requirements. Permits must be reviewed at least every 5 years (§402(b)(1)(B)). EPA may delegate the permit program to qualified states (§402(b)) or administer the program itself.

The permit process offers little opportunity for consideration of economics. The content of each permit is determined for the most part by the statute and EPA regulations. National effluent limits must be included where EPA has promulgated them. Compliance schedules are constrained by the statutory deadlines. The principle flexibility in the permit program is in setting effluent limits for sources not covered by effluent limitations guidelines. The permit writer has little statutory or judicial guidance in this enterprise.

8. Ocean Discharges - Section 403

a. Statutory Directive

Section 403 requires EPA to establish guidelines for the discharges of pollutants into the "territorial sea, the waters of the contiguous zone, or the oceans." No ocean discharges are authorized without a permit issued under §402 and permits must comply with the guidelines.

Section 403(c)(1) provides criteria EPA must apply in promulgating the guidelines. The criteria for determining the degradation of the specified waters include:

> (A) The effect of disposal of pollutants on human health or welfare, including but not limited to plankton, fish, shellfish, wildlife, shorelines, and beaches;

(B) The effect of disposal of pollutants on marine life including the transfer, concentration, and dispersal of pollutants on their byproducts;

(C) The effect of disposal of pollutants on esthetic, recreation, and economic values;

(D) The permanence and performance of the effects of disposal of pollutants;

(E) The effect of the disposal at varying rates of particular volumes and concentrations of pollutants;

(F) Other possible locations and methods of disposal or recycling of pollutants including land-based alternatives; and

(G) The effect on alternate uses of the oceans, such as mineral exploitation and scientific study.

If, with regard to any proposed discharge, EPA lacks sufficient information to make a reasonable judgment on compliance with any of the guidelines, then EPA may not issue a permit.

While the main emphasis of the criteria is on effects on environmental values, the criteria leave open the possibility of considering costs and balancing economic and environmental values. Subsection 403(c)(1)(C) requires consideration of the effect of disposal on "esthetic, recreation, and economic values." This reflects a concern for the costs imposed, for example on the fishing industry, because of pollution caused by ocean discharges. Subsection 403(c)(1)(F) and (G) require consideration of alt"rnative disposal methods and alternate ocean uses. Although they do not specifically include consideration of costs, they do not rule out the possibility that EPA may balance costs and benefits of alternatives compared to ocean discharges.

b. Legislative History

The legislative history concerning §403 makes no reference to consideration of costs in regulating ocean discharges. The history does reiterate that in promulgating

guidelines EPA is to consider the impact of pollution on "esthetic, recreation, and economic values," Conference Report, reprinted in 1972 Legislative History, vol. 1, at 323-4, but this appears to address benefits, not costs. The report on the Senate bill emphasized the need to preserve the ocean in as natural a state as possible, and recognized the problem of the migration of pollutants from the disposal site to the coastal zone and beaches of the United States. Reprinted in 1972 Legislative History, vol. 2, at 1492-3.

c. Case Law

Very few judicial decisions construe §403 because most of the regulation of ocean pollution occurs pursuant to the Ocean Dumping Act (Title I of the Marine Protection Research and Sanctuaries Act). However, Pacific Legal Foundation v. Quarles, 440 F. Supp. 316, 7 ELR 20653 (C.D. Cal. 1977, aff'd sub nom. Kilroy v. Quarles, 614 F.2d 225, 10 ELR 20271 (9th Cir. 1978), a decision involving the application of the National Environmental Policy Act to EPA enforcement actions, clarifies the distinction between EPA regulation under §403 and the Ocean Dumping Act. While §403 applies to the territorial seas, i.e., waters within three miles of the coast, and discharges from pipes regardless of their termination point, and the Ocean Dumping Act regulates discharges from vessels beyond the territorial seas, both prohibit EPA from granting a discharge permit if the dumping will "unreasonably degrade" the environment. The court explained that both provisions focus on harm to the environment.

9. Dredge and Fill Regulation - Section 404

a. Statutory Directive

Section 404(a) authorizes the Secretary of the Army through the Corps of Engineers to issue permits for the discharge of dredged or fill material into navigable waters of the United States at approved disposal sites. Disposal sites are reviewed by

the Secretary through the application of guidelines developed by the Administrator of EPA, in conjunction with the Secretary, based upon criteria comparable to the criteria for ocean discharges under §403(c). The criteria of §403(c) require EPA to consider (1) the effect of discharges or dredge and fill material on human health and welfare and marine life, (2) the persistence and permanence of the effects of discharges, (3) the effect of discharges at varying rates of particular volumes and concentrations of pollutants, and (4) other possible disposal methods. In addition, EPA must consider "the effect of disposal of pollutants on esthetic, recreation, and economic values." Thus, in establishing the guidelines, EPA's consideration of costs appears to be limited to the impacts of pollution from the discharges of dredge and fill material on economic values.

If the guideline would prohibit the specification of a site for discharge of dredged material, the Corps of Engineers may in addition consider the economic impact of the site on navigation and anchorage. In other words, if in applying the guidelines, the Corps determines that no discharges should be authorized, it may then consider whether the failure to authorize the discharges would have an adverse economic impact on navigation or anchorage.

Section 404(h) also authorizes EPA to approve state programs for issuing permits for the discharge of dredge and fill materials into navigable waters (other than those waters which are "presently used, or susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce . . .") in place of the Corps' program if the state is able to meet the standards set out in §404(h)(1). These standards require EPA to determine among other things, whether the state has authority under its laws to apply the §404(a)(1) guidelines. Section 404(h) does not specifically include or exclude consideration by EPA of the economic costs of state assumptions of the permit program.

b. Legislative History

The Senate debate on the conference report indicates that the House bill which was in part adopted by the Senate, treated the disposal of dredged material differently from other pollutants. The Secretary of the Army rather than the Administrator of EPA is responsible for issuing permits. In addition, dredge and fill permits are subject to a different set of criteria for determining the environmental effects of disposal than are other pollutants. EPA retains the authority and responsibility for enforcement for failure to obtain a §404 permit or to comply with conditions in a permit. In addition, EPA must establish guidelines for selecting disposal sites. Finally, the report indicates that EPA may veto a site selected for disposal if the discharge will adversely affect municipal water supplies, shellfish beds and fishery areas, wildlife, or recreation areas. No mention is made of cost considerations. See Senate Consideration of Conference Committee Report, reprinted in 1972 Legislative History, vol.. 1, at 177-8.

The Conference Report also emphasized that land-based alternatives to dredged spoil disposal should be identifed in order to end the disposal in navigable inland waters. During the Senate debate it was also pointed out that the only justifications for the failure to adopt alternatives is their cost, which was found insufficient to override the environmental impacts on fresh water lakes and streams. Id.

The House bill included a number of provisions that were not included in the final bill as enacted. Most relate to the authority of the Corps to consider economic costs in issuing dredge and fill permits, but some concern EPA's authority. The House Committee Report, reprinted in 1972 Legislative History, vol. 1, at 816-17, indicates that the House bill required the Corps to consider, in addition to EPA's 403(c)(1) guidelines, the effect on navigation, economic and industrial development, and foreign and domestic commerce of the United States. And the Corps would not have to follow EPA's prohibition of a site for discharges if there was no "economically feasible alternative reasonably available." These provisions were deleted in conference, however.

A final issue that came up during the Senate debate on the Senate bill was the impact of the application of EPA's guidelines on navigation and anchorage. Senator Ellender was concerned that EPA would in effect have veto power over the Corps' disposal of materials necessary to maintain navigable waterways and would as a result adversely affect the economy. The issue was resolved in the final version by allowing the Corps to consider the economic impact on navigation and anchorage if the application of the guidelines would prohibit specification of a site. Senate debate on S.2770, reprinted in 1972 Legislative History, vol. 2, at 1386-7.

c. Case Law

None identified.

II. Subchapter II - Grants for Construction of Treatment Works, Federal Water Pollution Control Act (As Amended)* 33 U.S.C. §§1281-1297, ELR Stat. 42117-42123.

A. Summary of Subchapter II

FWPCA declares that "it is the national policy that Federal financial assistance be provided to construct publicly owned treatment works" (POTWs) to help achieve the objective of restoring and maintaining "the chemical, physical and biological integrity of the Nation's waters." FWPCA §1251(a), ELR Stat. 42105. Congress developed Subtitle II, the construction grants program, to carry out this policy and provided the statutory basis for one of the nation's most expensive public works program. POTWs constructed with the aid of these grants are subject to the restrictions on pollutant discharges contained in other subchapters of the FWPCA.

The role of economics in regulating the discharges of pollutants is basically the same as that discussed earlier. However, the specific directions given to EPA by Congress on how to conduct cost-effectiveness analysis of proposed construction plans for specific plants intended to meet the clean-up requirements of the FWPCA were not discussed. Further, there are a number of provisions and requirements sprinkled throughout the Subchapter designed to minimize "federal exposure" in terms of monetary obligations. These provisions outlining grant giving procedures and restrictions governing EPA are the focus of this section.

Congress has amended Subchapter II of FWPCA three times since the 1972 enactment of the law - in 1977, 1980, and 1981. This series of amendments suggests an increasing concern by Congress that the grant process was not resulting in the construction of cost-effective treatment works. Congress, in response to an increasing concern about the amount of federal dollars committed to sewage treatment construction grants, has added progressively more stringent provisions to the law;

specifically, in terms of stages of "works" that can be funded by federal grants, the percentage federal share, and the treatment of industrial wastes with federal grants.

The general objective of Subchapter II is to ensure that "states municipalities, intermunicipal or interstate agencies" 33 U.S.C. §1281(g)(11), conduct waste treatment management "on an areawide basis" to "provide control or treatment of all point and nonpoint sources of pollution." 33 U.S.C. §1281(c). The objective is to be achieved through a program of federal grants to state or local agencies "for the erection, building, acquisition, alteration, remodeling, improvement or extension of treatment works...." 33 U.S.C. §1281(g)(2). A "treatment work" need not be a building or facility, it can be any device, system, or method for treating, recycling, reclaiming liquid municipal sewage or industrial wastes or for treating or separating storm water runoff. 33 U.S.C. §1292(2)(A).

State and local agencies desiring to obtain sewage treatment construction grants must apply to the Environmental Protection Agency (EPA). The agency's approval is conditioned on a number of criteria found in 33 U.S.C. §§1281, 1284, and 1297. Included are requirements that the proposed treatment work comply with the areawide and statewide plans 33 U.S.C. §1288; "that the size and capacity of the works relate directly to the needs to be served by the works" 33 U.S.C. §1284(a)(5); that the project is cost-effective according to agency criteria 33 U.S.C. §1284(a)(5); and that the applicant has adopted a system of charges or "user fees," which require recipients to pay their proportionate share of the costs of operation and maintenance of the works 33 U.S.C. §1284(b)(1). In addition, the EPA can withhold construction grants which the agency determines will interfere with air quality goals or a state's Clean Air Act state implementation plan (SIP) 42 U.S.C. §97616.

Grants are distributed at three stages of treatment work development 33 U.S.C. §1283. Step 1, facility planning, involves determining the need for the project and screening feasible alternatives. Step 2, facilities design, involves preparing construction drawings and specifications. Step 3 is the construction of the works.

The distribution of construction grants to POTWs is one of the few EPA activities subject to the requirements of the National Environmental Policy Act (NEPA) 33 U.S.C. §1371(c)(1). According to EPA, the environmental review process begins before or shortly after issuance of the step 1 planning grant. The impacts of concern include those associated with facility siting, sludge disposal, water quality impacts, and impacts associated with secondary growth spurred by the provision of new treatment capacity of sewers.

Construction grants are distributed by the federal government to recipients on a cost-sharing basis. As of October 1, 1984 the federal share is 75 percent 33 U.S.C. §1282(a)(1). However, if applicants utilize accepted innovative or alternative processes the federal share may be as high as 90 percent. After October 1, 1984 the federal share for most projects drops to no more than 55 percent and up to 75 percent for innovative and alternative processes. Moreover, after October 1, 1984 the Administration is restricted to providing grants to projects only for secondary treatment or more stringent treatment, or any cost-effective alternative thereto, with the exception of support structures such as new interceptors and appurtures, and infiltration-in-flow correction 33 U.S.C. §1281(g)(1) and 1282 (a)(1). Funds are distributed among the states according to their priority treatment needs 33 U.S.C. §1285, because the allocated funds, while substantial, are inadequate to meet the treatment needs of all applicants. States in turn rank grant requests by priority according to criteria developed under their water quality management plans 33 U.S.C. §1288(b)(2)(13).

Each POTW is required to obtain a national pollutant discharge elimination system (NPDES) permit 33 U.S.C. §§1342, which defines its pollution discharge limits in accordance with the appropriate effluent limitations and describe required sludge disposal procedures if such disposal results in pollutants entering navigable waters 33 U.S.C.. §1345. The 1972 Amendments established a timetable for the attainment by POTWs of three levels of increasingly stringent control. Secondary treatment of sewage

was to be achieved by July 1, 1977 33 U.S.C. §1311 (b)(l)(l3), “best practicable wastes treatment technology” by July 1, 1983 33 U.S.C. §§1281 (g)(2)(A), and 1311 (b)@)(B), and the ultimate goal of complete elimination of the discharge of pollutants into navigable waters by 1985 33 U.S.C. §1281(a)(1).

B. Regulatory Activities

1. The Cost-effectiveness Requirements - Section 1298 and 1297.

a. Statutory Directive

Section 1298, titled cost-effectiveness, is an explicit directive to design and administer the construction grants program so that the most cost-effective and economical POTW plant designs and operating practices are approved for funding. The law states: “It is the policy of Congress that a project for waste treatment and management undertaken with Federal financial assistance under this chapter by any state, municipality...shall be that system which constitutes the most economical and cost-effective combination of devices and systems....to implement section 1281....over the estimated life of the works....” 33 U.S.C. §1298(a). The administrator of EPA is directed to, infurtherance of this policy, only approve grants to states or local agencies for sewage and wastewater treatment plants that represent the most "economic and cost-effective combination of treatment works over the life of the project to meet the requirement of this chapter."

In addition, Congress directs the EPA administrator to require a “value engineering review” prior to approving any grant request for the erection, building, acquisition, alteration, remodeling, improvement or extension of a treatment work. A "value engineering review” is defined as "a specialized cost control technique which was a systematic and creative approach to identify and to focus on unnecessarily high costs in a project in order to arrive at a cost saving without sacrificing the reliability or efficiency

of the project" 33 U.S.C. §1298(c). The cost-effectiveness provisions of the statute places strict limits on the authority of EPA to provide funding for construction of wastewater treatment plants that do not meet the water quality requirements on the basis of costs of the FWPCA. Any cost-effectiveness analysis guidelines developed by EPA "shall provide for the identification and selection of cost-effective alternatives to comply with the objectives and goals of this chapter and Sections 1281(b), 1281(d), 1281(g) 21(A) and 1311 (b)(2)(B)." 33 U.S.C. §1287. These provisions of the law require that waste management treatment techniques funded by EPA must "provide for the application of the best practicable waste treatment technology" available before discharges into water bodies. The benefits of effluent limitations and the requisite treatment technologies are presumed valid regardless of the costs.

b. Legislative History

The legislative history supports the plain meaning of the cost-effectiveness provisions of Sub Chapter II of the Clean Water Act. Section 1298 of the law, added by Congress in 1981, Pub. L. 98-117, was enacted by Congress in response to reports (See U.S. General Accounting Office Report to the Administrator, EPA, entitled "Wastewater Dischargers Are Not Complying with EPA Pollution Control Permits," Dec. 2, 1983, GAO/RCED-84-53) that the construction grant program had been plagued by cost overruns, inefficiency and the construction of treatment works that did not clean-up or treat wastewater as claimed.

As the House Report on H.R. 4503 stated:

> This provision is designed to ensure that the highest degree of pollution control is achieved with the limited financial resources available. It will require the use of recognized engineering and economic estimating techniques, such as value engineering, in order to make sure that the various treatment works chosen are in fact the most economical ones attainable which will deliver the required performance."

> It was added "to ensure that the combination of treatment works selected for the overall treatment system will be the most economical and cost-effective...taking into account....costs. Other factors, including nonmonetary or nonquantifiable factors such as primary and secondary environmental effects,....and performance reliability...may also be included.

House of Representatives, Rep. No 97-270, at 14, 97th Cong., 1st Sess., reprinted in the Legislative History of the Municipal Wastewater Treatment Construction Grant Amendments of 1981 (hereinafter cited as "The 1981 Amendments"), U.S. Code Congressional and Administrative News, Vol. 3, at 2626, (1982).

The legislative history confirms a Congresssional intent to get "the biggest bang for the buck" in the construction grants program, with no question that economics, costs, and "other factors" are to be considered.

c. Case Law

There are no cases that shed more light on the meaning of the cost-effectiveness provisions in the statute than the legislative history does. One, Maryland ex rel. Burch v. Costle 8 ELR 20422 45 F. Supp. 1154, upholds the validity of the cost-effectiveness regulations developed by EPA under the authority of the 1977 Amendments to the Clean Water Act. The plaintiff challenged the EPA Administrator's decision to stop processing the Washington Sanitary Sewer Commissioner's request for funding a proposed sewage treatment plant in Dickerson, Maryland. One of the key reasons given by the Administrator for his decision was that the proposed project failed to satisfy the Agency's cost-effectiveness regulations by inadequately analyzing other possible sewage treatment methods and sites to determine whether there were acceptable, less costly alternatives to the Dickerson project. (at 20443) The Court upheld this application of the EPA cost-effectiveness regulations.

2. Statement of Congressional Purpose Underlying the Construction Grants Program — Section 1281.

a. Statutory Directive

Congress in Section 1281 declares that the purpose of the construction grants program is

> "to require and to assist the development and implementation of waste treatment management plans and practices... [that]...shall provide for the application of the best practicable waste treatment technology before any discharge into receiving waters, including reclaiming and recyling of water, and confined disposal of pollutants so they will not migrate to cause water or other environmental pollution and shall provide for consideration of advanced waste treatment techniques. 33 U.S.C. §1281(a), 1281(b).

The Section goes on to list what the EPA Administrator "shall" and "shall not" do in, approving applications for sewage treatment grants by states or local agencies. Included in these directives are a number of deadlines governing how the Administrator is to exercise his/her grant giving authority.

The Administrator is directed not to make grants for construction of treatment works:

- For any fiscal year after June 30, 1974 unless the grant applicant has satisfactorily demonstrated that "alternative waste management techniques have been studied and evaluated and the works proposed for grant assistance will provide for the application of the best practicable waste treatment technology over the life of the works §1281(g)(2)(A);

- For any fiscal year after June 30, 1974; unless the works "allow to the extent practicable the application of technology at a later date which will provide for the reclaiming or recycling of water or otherwise eliminate the discharge of pollutants" §1281(g)(2)(B);

- After July 1, 1973 "unless the applicant shows to the satisfaction of the Administrator that each sewer collection system discharging into such treatment works is not subject to excessive infiltration" § 128 (g)(3);

- After September 30, 1978 unless "the grant applicant has satisfactorily demonstrated to the Administrator that innovative and alternative wastewater treatment procedures and techniques which provide for the reclaiming and reuse of water, otherwise eliminate the discharge of

pollutants, and utilize recycling techniques, (land treatment, new or improved methods of waste treatment management for municipal and industrial waste (discharged into municipal systems) and the confined disposal of pollutants, so that pollutants will not migrate to cause water or other environmental pollution, have been fully studied and evaluated by the applicant" §1281(g) (15);

- After September 30, 1978 "unless the grant applicant has satisfactorily demonstrated to the Administrator that the applicant has analyzed the potential recreation and open space opportunities in the planning of the proposed treatment work" §1281(g)(6);

- After November 15, 1981 "for a publicly owned treatment works other than for facility planning and the preparation of construction plans and specifications, shall be used to treat, store, or convey the flow of any industrial user into such treatment works in excess of a flow per day equivalent to fifty thousand gallons per day of santitary wastes." §1281(k);

- "After December 29, 1981, Federal grants shall not be made for the purpose of providing assistance soley for facility plans, or plans, specifications, and estimates for any proposed project for the contruction of treatment works" §1281(b).

In addition to giving the EPA Administrator explicit instructions on how to exercise his grant approval authority, Section 1281 also provides the Administrator guidance on treatment work designs he "shall encourage".

The Administrator "shall encourage waste treatment management" that:

- "results in the construction of revenue producing facilities" that provide for the recycling of pollutants through the production of farm products, the confined and contained disposal of pollutants not recycled, the reclamation of wastewater, and the disposal of sludge in an environmentally sound manner. 33 U.S.C. §1281(d),

- "results in integrating facilities for sewage treatment and recycling with facilities to treat, dispose of, or utilize other industrial and municipal wastes, including but not limited to solid waste and waste heat and thermal discharges. Such integrated facilities shall be designed and operated to produce revenues in excess of capital and operation and maintenance costs and such revenues shall be used by the designated regional management agency to aid in financing other environmental programs. §1281(e),

- "will reduce total energy requirements." §1281(i).

The Administrator is also to encourage and assist applicants in developing sound capital financing plans §1281(o). As a step further, Congress set up an Environmental Financing Authority to assist the state or local government in implementing these plans. P.L. 92-500 §12 added as a footnote to §1281.

These Congressional directives and deadlines contain some guidance as to how EPA may factor in economics, although they do not state precisely the role which economics may play. At the same time, they contain no prohibition on the use of the best practicable waste treatment technology. In fact, the Administrator requires the consideration of "innovative and alternative" wastewater treatment methods, and that treatment works be revenue producing facilities indicates that Congress expected the consideration of costs and treatment efficiencies to play major role in the construction and operation of publicly owned treatment works.

b. Legislative History

The legislative history is replete with references to the cost and treatment efficiency considerations which the Administrator of the EPA is to include while assisting state and local agencies in "the development and implementation of waste treatment management plans and practices."

During a 1971 Senate debate on §2770 (the Senate bill for amending the FWPCA which eventually became the law) Senator Bensten from Texas explained that:

> "....-Sections 201 and 208 of the Bill require comprehensive regional waste treatment management plans, created by designated local planning agencies, as a condition for any approval of construction grants - . . ..This affirmative mandate for systematic analysis and creation of cost-beneficial water quality strategies lies at the core of this legislation, and it will require the most sophisticated use of systems analytical techniques....

Statement of Senator Bensten during Senate debate on §2770, 93rd Cong., 1st Sess., reprinted in a Legislative History of the Water Pollution Control Act Amendments of 1972 (hereinafter cited as the 1972 Legislative History), Vol. 2, at 1286, (1973).

BPWTT

The legislative history covering the "best practicable waste treatment technology over the life of the works" (BPWTT) provision under 201 is silent on the role costs are to play in setting BPWTT. Approval for a grant cannot be extended until the BPWTT has been chosen, yet the treatment selection process involves "careful study." As noted in the House Report amending §2770 to include the BPWTT requirement:

> "The term 'best practicable waste treatment technology' covers a range of possible technologies. No single treatment or disposal technique can be considered to be a panacea for all situations and selection of the best alternative can only be made after careful study."

H.R. Rep. No. 92-911, 92nd Cong., 2nd sess., reprinted in the 1972. Leg. Hist. Vol. 1, at 774, (1973).

Arguably, economic analysis was perceived by Congress as a proper part of the "study".

Open Space and Recreation Analysis

The legislative history includes a discussion of the 1977 Amendment requiring an analysis of recreation benefits and open space potential under the waste treatment planning process. It is plainly stated that the Administrator is to provide the basis for incorporating benefits analysis into the planning process, although the extent to which recognized benefits must be economic is unclear. As the author of the Amendment Senator Burdick explained:

". . . .the Federal Government's water pollution control efforts have, from the beginning, emphasized potential recreation benefits. The goal of swimmable lakes, streams, and rivers is (sic) fully embraced in the FWPCA. Yet, we have seen little actual implementation of plans to encourage the realization of direct recreation benefits in the design and construction works. For this reason, I am offering minor amendments to the act....to require analysis of recreation and open space potential in the waste treatment planning process....

....there should be....a relationship between wastewater treatment plants and state and local recreation and open space plans....

....and....the consideration of recreation and open space benefits prior to final approval and grant award for the construction of treatment works."

Statement of Senator Burdick during Senate debate of $1952, reprinted in a Legislative History of the Clean Water Act of 1977, a continuation of the Legislative History of the Federal Water Pollution Control Act (hereinafter cited as the 1977 Legislative History), vol. 4, at 1031-1032, (1978).

There is no suggestion in the Senator's statement that the "analysis of recreation and open space potential" must be non-economic, suggesting that a cost-effectiveness or cost/benefit tool could be applied in the analysis.

Innovative and Alternative Practices

Another area in which benefit analyses and cost comparisons might be applied is found in the 1977 Amendment requiring all applicants to fully analyze and study innovative and alternative waste treatment technologies and practices. During a House debate on H.R. 3199, the conferees agreed that past efforts at construction work plans ignored new innovative methods and techniques which potentially held more environmental benefits than those currently in use. The risk and cost of failure associated with these alternative techniques seemed to be inhibiting. A mechanism to reduce that risk was sought and found and incorporated into the conference report which, in December became an official provision of the Clean Water Act of 1977. In the words of Congressman Roberts:

> The conferees recognize the problems of inertia and the tendency to cling to the tried-and-true and to avoid risks, and accordingly have structured a comprehensive set of amendments to overcome them...As to intent, we want to make it clear that these innovative and alternative technology amendments are in no way intended to substitute for research and development programs under Title I. . ..[or] . . ..to require studies of technologies with no realistic potential for being used....
>
> * * * *
>
> We think the key has in the recognition and acceptance of a certain element of risk, which is why we provide the insurance policy in the form of the Federal Government to assume....the costs of modifying or replacing systems which fail to perform as intended. These risks are deemed acceptable in light of the potential benefits in terms of environmental enhancement, lower capital or maintenance costs, and reclamation, recycling and use of water which is becoming increasingly costly to provide.

No. 95-830, 95th Cong., 2nd Sess., reprinted in the 1977 Legislative History, vol. 3, at 306-309. (1978).

The legislative history makes clear the reason for adding the I/A requirement as well as the role which economic and cost considerations are to play. Congress, by providing the vehicle for reducing risk, appears to be directing EPA to encourage grantees to consider a broader range of approaches. More specifically, the provision allows and directs them to compare and contrast the costs, benefits and treatment efficiencies of each approach. This directive for “comparison shopping” leaves ample room for economic considerations and, as noted in the introduction to this report, for "greater consideration and sensitivity to variations in....cost and benefits.”

Additionally, the legislative history suggests that economic considerations are to be part of in a comprehensive review undertaken by EPA. Congressman Roberts continues, explaining in full:

> Several criteria should be relied upon to evaluate the innovative or alternative character of technology. The criteria include cost reduction; improved reliability; energy conservation and recovery;.... greater efficiency (sic); the beneficial aspects of sludges or effluents or constituents;....and environmental benefits.

It is plainly stated that the evaluation should include "cost...and environmental benefits." However, there is no elaboration on the manner of evaluation or on the weight given to each separate criterion. Much is left to EPA's discretion.

Revenue Producing Requirement

The 1981 Amendments which call for revenue producing facilities and which direct the Administrator to encourage and assist applicants for grant assistance to develop capital financing plans were enacted to promote economic self-sufficiency among local facility owners and, arguably, economics plays a fundamental role in the plans.

The legislative history offers some guidance as to the mechanism on which the Administrator is to rely "to encourage....long-term planning;" the fact that it is an economic incentive is evidence that economics may be used. Included in H.R. 97-270, which was passed in lieu of S1716, is a full explanation concerning why the provision was included among the 1981 changes. As members of the House noted:

> The committee has been concerned for some time that grant-assisted municipalities are not establishing financial plans adequate to ensure that projects will be able to operate successfully and without further financial assistance. If this is the case, then achievement of the goals of the Act may recede into the indefinite future, for wastewater treatment will continually fall behind treatment needs as those systems fail to generate revenues required to ensure their continued operation, expansion, and reconstruction...
>
> Generally speaking, there has been an inadequate attempt by grantees to forecast long-term capital needs and to identify potential financing to cover those needs...[this section] will provide the means for the Administrator to encourage this type of long-term planning.

House Report, No. 92-270, 97th Cong., 1st Sess, at 8, reprinted in The 1981 Amendments, vol. 3, at 2636, (1982).

The legislative history quoted should erase any doubts that economic considerations play a major role in the construction grants program.

c. Case Law

The only case relevant to Section 1281 interprets the meaning of the term "best practicable waste treatment technology" in Section 1281(b). (C.f. EDF v. Costle 8 ELR 20145 439 F. Supp. 980 (E.D. N.Y. 1977.) Here the Court interpreted the phrase saying "'Practicable does not call for a wooden interpretation as if Congress had mandated a particular method of wastewater treatment for all situations at all times," at 20154. This interpretation according to the court is the only way to make Section 2-1 harmonious with the other subsections of the Congressional Statement of Purpose, Section 201. In other words, the Court logically concludes that the Administrator cannot encourage both the adoption of "integrated facilities...designed...to produce revenues" §201(c), or alternative, innovative technologies §201(g)(2)(A) of waste treatment methods and techniques that reduce energy requirements, and hold facilities to rigidly defined wastewater treatment requirements.

3. Criteria Guiding EPA in Approving POTW Construction Grants - Sections 1284 and 1288.

a. Statutory Directive

EPA's approval of grant requests for "any state, municipality, or intermunicipal or interstate agency for the construction of publicly owned treatment works" is conditioned on the proposals and plans satisfying a number of criteria. The "treatment works" plans and designs must be cost effective as has already been discussed in Section 1. The "works" must be included in area wide waste treatment plans under §1288 of the law and

must be higher on the state “priority” lists than other "works." §1281(a)(1)(2) and (3). The applicant must agree to pay the “non-Federal costs” of the "works" and show to the Administrator's satisfaction that it is competent to operate and maintain the works. §1281(a)(4). The “size and capacity of such works" must relate directly to the needs to be served, including sufficient reserve capacity §1281(5). The applicant must adopt a system of user fees or charges “sufficient to assure each recipient of waste treatment services within the applicant's jurisdiction. . ..will pay its propotionate share.” §1284(b).

Consideration of economic factors is implicit in each of these limitations and conditions of the EPA Administrator's authority to approve construction grants.

The Planning Requirements and State Priority Lists

There are six sections of FWPCA that contain planning requirements. In theory they are to work together to ensure that EPA, state and local governments develop plans and follow them before spending funds for treatment plants and enacting regulatory schemes. The relevant sections for the construction grants program are Sections 1288 and 1313. Section 1288 requires the adoption, by designated state and local agencies, of “areawide waste treatment management plans” that identify, among other things, “treatment works necessary to meet the anticipated municipal and industrial waste treatment needs of the area over a twenty-year period, annually updated.” These plans should conform to all the requirements listed in Section 1281 (see discussion above) as preconditions for EPA approval. §1288(b)(2)(c). In addition, the plans should establish "construction priorities" for treatment works and time schedules for the initiation and completion of such "work" §1288(b)(2)(B).

Section 1288 provides ample opportunity for economic considerations to enter into the long range planning process. EPA's role in is to both review and approve plans and to provide state and local agencies guidance in their preparation. The agency can encourage designated state and local agencies to take costs and benefits of alternative

plans into account in developing their plans. Section 1285(J) provides supplemental planning funds for states to use in determining those publicly owned treatment works which would be constructed with assistance under this subchapter; in determining in which areas and in what sequence they would be constructed, taking into account the relative degree of effluent reduction attained, the relative contributions to water quality of other point or nonpoint sources, and the consideration of alternatives to such construction; and for implementing Section 1313(e) of this title.

Section 1313(e) calls for each state to have a "continuing planning process" approved by the EPA Administrator. One of the criteria for approval is that the plan include "an inventory and ranking, in order of priority, of needs for construction of waste treatment works" required to meet water quality standards and effluent limitations.

The driving consideration in setting treatment work construction priorities, therefore, is the need for treatment of discharges into particular water bodies to allow the water body to achieve water quality standards. Cost-effectiveness considerations are allowed but the benefit of water meeting water quality standards and goals is seemingly not to be questioned.

Size and Capacity Limits

The limitations on treatment works size and capacity are included by Congress to minimize the Federal exposure of dollars committed to treatment works. The amount of reserve capacity planned for in a treatment work must reflect "projected population and associated commercial and industrial establishments" in the area to be served by the facility. EPA regulations developed to guide the calculation of reserve capacity that can be funded with federal grants shall take "into account....efforts to reduce total flow to sewage and unnecessary water consumption." 1284(a)(5).

User Fees or Charges

The user fee or charge provision in Section 1284 hinges on the effort of Congress to minimize the federal dollar exposure under sewage treatment construction grants program. The EPA Administrator is directed to authorize grants for treatment works after ensuring that the applicant has met two requirements. One, the applicant must adopt a system of charges for users of the system sufficient to cover the costs of operating and maintaining the treatment work and, two, these charges should be proportionate to the users demand on the facility. The Administrator is directed to issue "guidance applicable to payment of waste treatment costs" by users establishing classes of users, and criteria for evaluating the adequancy of charges. Not only must the applicant show that it has a user fee system, but the applicant must also establish to the Administrator's satisfaction the capability of implementing and enforcing the system. While leaving it up to the discretion of EPA to consider optional user fee systems, the statute identifies some optional methods for levying user charges including "metering the sewage or water supply flow at residential recipients of waste treatment services, or ad valorem taxes. §1284(b).

User fees or charges are based upon the "polluter pays" principle. In the case of sewage treatment, fees applied to dischargers to POTWs should encourage them to discharge smaller volumes of water and adopt practices minimizing discharges of pollutants into wastes. Clearly, in implementing this statutory directive EPA was to rely on the use of economic tools.

b. Legislative History

The Planning Requirements and State Priority Lists

The legislative history of EPA's authority to approve areawide/state wastewater treatment management plans suggest that Congress wanted the plans to account for economic considerations. Both the Senate and House legislative histories indicate that economic factors are to be considered in any areawide waste treatment management plan although it is not clear just how large a part they are to play. The Conference Report noted:

> "The plan is required to contain waste treatment construction priorities and information on waste treatment needs for a 20-year period, and to create a regulatory program to control industrial discharges....
>
> . . ..and the Governor is required to designate a single representative organization,....capable of developing an effective areawide waste treatment management plan....

From Conference Report No. 92-1236, 92nd Cong., 2nd Sess., at 116 reprinted in the 1972 Leg. Hist., vol. 1, at 299 (1973).

> "....But...this does not mean that the representative organization shall be made up solely of such elected officials or their designees.
>
> The conferees expect that the development of the management plans will be based upon technical, social, economic, and environmental considerations, and not political considerations."

Statement of Congressman Roe during House consideration of Conference Report No. 92-1236, 92nd Cong., 2nd Sess., reprinted in the 1972 Leg. Hist, vol. 1, at 270, (1973).

The legislative history supports the notion that EPA's authority to use economic based analytic tools in reviewing and approving state waste treatment project priority lists is constrained. The Report accompanying the 1981 Amendments to the CWA, as the report of the Conference Committee, addresses the issue directly:

> ....the legislation would direct a State in establishing its priority list for projects to give the highest priority to those projects which will directly benefit areas of urban-industrial concentration and will result in significant public health or water quality benefits."
>
> Further,".... it is the policy of Congress that projects for wastewater treatment and management undertaken with Federal financial assistance under the water Pollution Control Act shall be projects which ....are designed to achieve optimum water quality management consistent with the public health and water quality goals and requirements of the Act....it is imperative that the projects to be built are those which are most needed to meet the goals of the Act. Considerations of water quality benefits is the paramount considerations improvement as defined by the technology limited effluent standards developed by EPA with regard to achievment of improved water quality.

House Report, No. 92-270, 97th Cong., 1st Sess., at 4 reprinted in the 1981 Amendments, vol. 3, at 2632, (1982).

Meeting water quality goals is the paramount consideration.

Size and Reserve Capacity Limits

The legislative history of FWPCA Section 204 that limits the size and capacity of treatment works specifically calls for the Administrator to weigh the comparable costs of meeting current needs only or also providing for future needs during the present period. Put simply, the underlying goal is to minimize the total spending, and the Administrator has the authority to use economic balancing analyses to meet that goal. Written is the Senate Report of the bill which served as the framework for the final 1972 amendments was the follow language:

> "Reserves for long-term increases in load are to be determined on the basis of a comparison of the costs of....such reserves....versus the anticipated cost of providing expanded capacity....when such is required. It will often be more economical to design the plant from the beginning to accomodate planned future loads rather than enlarging the plant....in the future....There are situations, however, when such other factors as financing unused capacity.... will exceed the benefits to be

> derived. . ..Therefore, the Administrator is given the authority in the Act to weigh the comparable costs in providing reserve capacity either immediately or at some future point in time."

Reprinted in the 1972 Leg. Hist., Vol. 2, at 1455-1446. From Senate Report No. 92-414, 92nd Cong., 1st Sess., at 28, (1973).

In the 1977 Amendments a provision was added to consider the "projected population and associated commercial uses" when deciding on the amount of reserve capacity to be built. Again, the concern of Congress was adequately ensuring fulfillment of future needs without unnecessary spending increases. Costs were as large a consideration in 1977 as they were in 1972. During a 1977 House debate on the Conference report it was noted:

> This Section gives authority to the Administrator to establish capacity limitations with respect to treatment facilities as well as interceptor systems. In carrying out his responsibility, it will be essential that the Administrator be aware of the intent of the Congress as expressed in the language dealing with reserve capacity, which is intended to guarantee sufficient facility capacity to meet future known or anticipated needs.
>
> The intent is that the Admninistrator will, in carrying out his responsibilities under this phase of the statute, be fully responsive to the need for sizing treatment works, interceptors, collectors plus other appurtenances involved in the construction of pollution control projects in order to accomodate for normal growth, as envisioned by State and local jurisdictions.
>
> If we permit EPA a free hand in this area, projects will be so undersized that they will be over-taxed prematurely and the Congress will then be confronted with the prospect of funding plant expansion which should have been avoided in the first instance. The program cost is already high and we cannot allow ourselves to be trapped by unrealistically low growth projections by EPA. Municipalities are not going to absord the extra costs of capacity over that which EPA will allow but which is truly needed to satisfy future needs. The result will be early obsolescence and the ultimate investment could easily research twice the present estimates.

Conference Report No. 95-830, 95th Cong., 1st Sess., reprinted in the 1977 Legislative History, vol.3, at 386, (1978).

User Charges

The legislative history cooroborates that the user fee provisions of the statute are based on economic theory. The history shows that Congress intended for EPA to develop flexible guidelines for reviewing and approving the user fee systems. This idea of a "flexible framework" appears to have been included so to allow for economic trade-offs.

In order to clarify this idea, Senatory Muskie emphasized flexibility of design during the Senate debate:

> "....I think that the following language from the committee report may....be of assistance:
>
> These guidelines should take into account the diversity of legal and financial factors that exist from jurisdiction to jurisdiction, and each applicant should be permitted reasonable flexibility in the design of a system of user charges that meets the unique requirements of his own jurisdiction. As a general rule, the volume and character of each discharge into a publicly owned system should form the basis of determining the rate at which each user should be required to pay.
>
> But the flexibility point is emphasized, and I think it should be, because we are trying to encourage experiments and flexibility.

Statement of Senator Muskie during Senate debate on S.R. No. 92-414, 92nd Cong., 1st Sess., reprinted in the 1972 Leg. Hist., vol. 2, at 1352, (1973).

> The October 28, Senate Report read: "Discretion is left to the Administrator and to state and local authorities as to the structure of each individual system of user charges. A difficult problem associated with industrial discharges is the calculation of the rate of assessing such charges. Industrial wastes vary considerably in their volume and character."

Senate Report No. 92-414, 92nd Cong., 1st Sess., at 29, reprinted in the 1972 Leg. Hist, vol. 2, at 1447, (1973).

Based upon this legislative history it appears that Congress intended to give EPA broad discretion in reviewing and approving user charge systems.

c. Case Law

User Fees

The only cases that examine the economic parameters governing EPA's grant approval criteria focus on the user fee provisions of section 1284. In Hotel Employees Association of San Francisco v. Gorsuch 12 ELR 20591, 699 F. 2d 1305 (9th Cir. 1982) the Court interpreted the phrase "proportionate share" in Section 1284 (b)(1) broadly. The plaintiff Hotel Employer's Association had challenged San Francisco's city sewer system because it allocated surface run-off treatment costs according to the same formula that apportions sanitary waste treatment costs. The district court ruled that EPA had acted properly in approving San Francisco's formula. The circuit court upheld this decision finding that Congress intended to give municipalities and sewage authorities flexibility to develop innovative financing schemes rather than to impose an absolute proportionality requirement.

The Third Circuit in City of New Brunswick v. Milltown 12 ELR 20803, 686 F. 2d 120 (3rd Cir. 1982) sheds further light on the meaning of the "proportionate share" phrase. Milltown refused to devise any sort of user fee system to pay its proportionate share for the sewage treatment plant in New Brunswick receiving its waste. EPA withheld sewage treatment grants for the POTW that received Milltown's waste because Milltown's refusal constituted a violation of the proportionality requirement of the law. The Court upheld EPA's interpretation of Section 1284 (b)(l) prohibiting the outright refusal by a user of a POTW to adopt a user fee structure. The court agreed with EPA'S argument that Congress included the proportionate share language to provide users of Federally funded wastewater treatment facilities flexibility in how they devised their user fee system, not in whether they must devise one.

(See also Middlesex County Utilities Authority v. Borough of Sayreville 12 ELR 21097, 121101 (3rd Cir. 1982), which upholds the constitutionality of the limit Congress,

in the 1977 Amendments, placed on the adoption of ad valoren taxes by municipalities as a means to satisfy the Section 1284(b)(1) proportionality requirement.)

4. Extensions and Waivers - Section 1311(h) and (i).

a. Statutory Directive

The Clean Water Act provisions for the sewage treatment construction grants program in Subchapter II contain both extensions and waivers. The "municiple extensions" postpone the deadline by which POTWs are required to meet secondary treatment standards. 33 U.S.C. §1311(i). The waiver provisions exempt qualifying ocean POTW's outfalls from secondary treatment requirements all together. 33 U.S.C. §1311(h). Not surprisingly, these extensions and waivers have been the focus of debate in Congress, and once enacted, in court.

Secondary Treatment Extensions

Since only one-third of the approximately 12,000 municipalities complied with the 1977 statutory deadline for secondary treatment, Congress included a provision for "municipal extensions" in the 1977 Amendments, Pub. L. 95-217. Additional extensions to July 1, 1988 were authorized by Congress in the 1981 Amendments because of continued failure by POTWs to comply with secondary treatment deadlines. (Pub. L. 97-117 Section 22(e). This extension authorizes the EPA Administrator to issue a POTW an NPDES permit, or a modification of its existing permit, designed to bring the POTW into compliance with the secondary treatment standards at "the earliest date practicable, but no later than July 1, 1988." §1311(i)(2)(B). These extensions were included in response to the reality that many POTWs could not meet deadlines. Apparently they were not included to increase EPA flexibility to review economic factors.

Ocean Outfall Waivers

Under the 1977 Amendments to the Clear Water Act, POTWs with ocean outfalls are eligible for waiver from the secondary treatment requirement. 33 U.S.C. §1311(h). This exemption shifts the focus from the level of treatment performed by a treatment facility to the impact on the receiving water i.e. the impact on the marine environment. If a municipality can satisfy the environmental impact criteria listed in the Act, it may obtain a permit requiring treatment less stringent than that mandated by the secondary treatment requirement. These criteria include:

- that there be a "water quality standard specific to the pollutant for which the modifications is requested;"
- that the increased discharge not violate the water quality standard nor threaten water supplies or fish and wildlife;
- that the applicant has established a system to monitor the impact of discharges; and
- that the modified discharge requirements not result in additional requirements for other point and non-point sources.

The ocean outfall waiver provisions for POTWs provide some flexibility to apply cost benefit analysis in distributing construction grants. Under these provisions, expensive secondary treatment is not required of POTWs discharges where they will have no negative impact.

b. Legislative History

The legislative history offers some guidance in regard to where economic analysis can and cannot be used in the decisionmaking process to approve a waiver or extension of time for secondary treatment requirements on municipal discharges. The requirement

that all ocean outfalls from POTWs attain secondary treatment might, in the opinion of Congress, result in benefits disproportionate to the associated costs. As such, it seems that their intent was to direct the Administrator to weigh both the benefits and costs of such treatment before requiring it. In other words, to perform a cost-benefit analysis.

> "Section 301(h) was added in 1977 in recognition of the fact that, while high degrees of treatment remain necessary for discharges into rivers, lakes and streams, some exception could made for discharges into certain ocean waters...Failure to broaden eligibility [for a waiver] ....risks requiring treatment for treatment's sake."

P. 2644 of House Report 97-270, reprinted in The 1981 Amendments (1982).

Clearly the Administrator may take advantage of applying economics in the decisionmaking process.

Conversely, the authority of the Administrator to include economic considerations in granting extensions to municipal sources discharging into non-ocean waters to meet secondary treatment standards is limited. According to the legislative history, the sole purpose of awarding extensions is to ensure that the original standards of FWPCA are met. There is no indication that they are allowed to relax this requirement by factoring in costs. In the words of Congressman Hammerschmidt during a House debate:

> I would like to stress that these are not blanket extensions; rather, they are intended to be granted only in those cases where dischargers have made good faith efforts to meet the 1977 requirements but have not."

Statement of Cong. Hammerschmidt during House debate, 95th Cong, 1st Sess, reprinted in the 1977 Leg. Hist., vol. 4, at 1295, (1978).

The House Report No. 95-139 added:

> "The fact that time modifications are permitted . . . in no way affects the applicability of . . . (the secondary treatment) requirements . . . under the Act."

H.R. No. 95-139, 95th Cong., 1st Sess., reprinted in the 1977 Leg. Hist., vol. 4, at 1213, (1978).

c. Case Law

Secondary Treatment Extension

None.

Ocean Outfall Waivers

The D.C. Circuit confirms the above reading of the statute and the legislative history in NRDC v. EPA in ELR 20481, 657 F. 2d 768 (D.C. Cir. 1981). NRDC challenged EPA's Section 1311(h) regulations for being too permissive and the Pacific Legal Foundation challenged them for being too strict. The Court interpreted the statute to create a broad variance program that came about because of arguments before Congress by cities in the states of Washington and Alaska that secondary treatment was unnecessary in their coastal areas because they are subject to high rates of flushing by the change in tides.

Therefore, the Court struck down those provisions of EPA's regulations that prohibited the issuance of waivers for the discharge of sewage receiving less than primary treatment and that prohibited treatment plants that were already meeting secondary treatment standards from applying. The Court also rejected piaintiffs' requests to place restrictions on the availability of waivers: i.e., that they were only available to West Coast cities and that they were available only to plants with outfalls at a maximum depth.

In essence, the Court interpreted the law to allow EPA to grant the waiver to any sewage treatment plant that met the environmental impact criteria. Interpreted in this way, the statute gives EPA broad authority to consider the costs and benefits of holding sewage treatment plant effluent discharged into marine, waters to stringent secondary treatment requirements. However, this authority is tempered by the stringent environmental impact criteria.

5. Application of NEPA to Sewage Treatment Construction Grants Program -Section 1371

a. Statutory Directive

The sewage and wastewater treatment works construction grants program is one of two FWPCA programs subject to the requirements of the National Environmental Policy Act (NEPA). NEPA requires that Federal agencies undertaking “major federal actions” to identify and develop methods and procedures “which will ensure that presently unqualified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations.” Section 102(B), NEPA. Therefore, if the planned construction of a POTW with federal funding is determined to be a “major federal action," EPA must comply with the “environmental impact statement (EIS) requirements” of Section 102(2)(C) of NEPA prior to the grant. The impact evaluated by construction grant EISs are primarily those associated with siting, sludge disposal, water quality impacts of the project and the secondary growth facilitated by new treatment capacity or sewers.

While the consideration of economic impacts and factors is a significant part of the impact analysis process under NEPA, the Act’s central purpose is to change the internal decisionmaking of federal agencies to ensure that environmental factors enter into government planning, policymaking and action.

b. Legislative History

The legislative history patently supports considerations of economic factors in connection with the grants program being subject to the requirements of NEPA. Amid Senate consideration of the proposed 1972 amendments, the Conference Committee made it a point to emphasize that Sections 201 and 402 and only 201 and 402 must perform the requisitory balancing of NEPA. Citing a statement of Senator Muskie:

The mandate of NEPA is very broad. The mandate of EPA is quite narrow. The Federal Water Pollution Control Act Amendments of 1972, for example, charge the Administrator of EPA with a direct mandate to regulate the discharge of pollutants into waters of the United States. The sole purpose of the Act is to establish a detailed regulatory mechanism for restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters. The goal of the Act is to eliminate the discharge of pollutants into the Nation's waters by 1985.

In the administration of the Act, EPA will be required to establish numerous guidelines, standards, and effluent limitations. Nonetheless, virtually every action required of the Administrator will involve some degree of agency discretion-judgments involving a complex balancing analysis of factors that include economic, technical and other considerations. The Act seeks to guide the Administrator, to the extent deemed humanly possible by the Congress, in the matter of assigning relative weight to the many factors that he must, under the Act, consider...

NEPA requires, in Section 102(2) (B), for example, that agencies of the Federal government identify and develop methods and procedures "which will ensure that presently unquantified environmental amenities and values may be given considerations." The ground rules for this kind of finely-tuned, systematic balancing analysis are explicity set out repeatedly in the FWPCA.

This Act specifically identifies factors to be considered by the Administrator in making this kind of balancing analysis and the Conferees concluded that the substantive purposes and procedures of the Act fully satisfy and go far beyond what is required by 102(2) (B) and would be frustrated if other factors were to be injected into the decisions of the Administrator by NEPA.

. . ..The Conferees concluded that it would be sound policy to extend the applicability of NEPA to two of the Administrator's regulatory responsibilities: the making of grants for the construction of publicly owned waste treatment works and the issuance of permits under section 402 of the FWPCA to "new sources" as defined in Section 306.

The Conferees determined that it would be useful to apply, in the case of waste research grants, the requirement of NEPA included in Section 102(2) (C) and 102(2) (D). Application of these section swould cause the Administrator to consider "alternative" methods of waste treatment which may have the beneficial effect of decreasing blind reliance on "secondary treatment" and stimulate more innovative methods of waste treatment.

> The Conferees believe that the owner or operator of what is to be a new source has a degree of flexibility in planning, design, construction, and location that is not available to the owner or operator of an existing source. The Conferees concluded, therefore, that it would be both appropriate and useful for the Administrator to consider the various "alternatives" described in sections 102(2) (C)...
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> Thus, it is the clear intent of Section (511)(c)(1) of this bill that the only actions of the Administrator subject to any of the provisions of NEPA are the issuance of a permit to a new source and the making of a grant under Section 201. It is the clear intent of Conferees of both Houses-it was certainly the clear intent of the Conferees when this provision was unanimously adopted-that all of the provisions of NEPA should apply to the making of grants under Section 201 and the granting of a permit under Section 402 for a new source and that none of the provisions of NEPA would apply to any other action of the Administrator.

Statement of Senator Muskie cited during Senate consideration of the Conference Report No. 92-1236, 92nd Cong., 2nd Sess. reprinted in the 1972 Legislative history , Vol. 1, at 180-181, (1973).

c. Case Law

The Third Circuit decision in Cape May Greene, Inc. v. Warren (3 Cir. 1983) 13 ELR 20319, 698 F.2d 179 illustrates the role economic analysis plays in the application of sewage treatment grant review. EPA issued the Cape May County Municipal Utilities Authority a sewage treatement grant on the condition that the sewage authority ban sewer hookups in floodplain areas. The plaintiff developer challenged the condition and the district court upheld the EPA action. The circuit court reversed the district court decision finding that the conditional grant was arbitrary and capricious because: 1) the Agency has no authority under the Clean Water Act, NEPA, or Executive Order 11988 (one floodplain development) to condition funding that in effect imposes land use controls; and 2) because the Agency failed to give sufficient consideration to the consistency requirements of §30 of the Coastal Zone Management Act (New Jersey and the sewage authority approved the plan development in the floodplain as long as it

complied with the requirements of the Federal Emergency Management Act restrictions on buildings in floodplains).

In reaching its decision the court reviewed the scope of EPA's authority under NEPA to pursue environmental protection policies in the sewage treatment grant approval process. NEPA imposes on federal agencies responsibility to consider the consequences of their actions on the environment. However, "the Act is not a mandate to pursue environmental policies to the exclusion of all others, but is rather a Congressional reordering of priorities so that environmental costs and benefits will assume their proper place along with other considerations at 20323. As is stated clearly in Section 102(2)(B) of the Act, federal agencies are to develop methods and procedures to "insure that presently unquantified environmental amentities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations." 42 U.S.C. §4332(2)(B). As the court concludes "In short, the National Environmental Policy Act requires a balancing between environmental costs and economic and technical benefits," at 20323.

A decision by The Eastern District Court of New York some years earlier examined the role economic conditions play in a NEPA review by EPA of a sewage treatment grant application in EDF v. Costle (ED N.Y. 1977) 8 ELR 20145. The plaintiff challenged EPA's grant of sewage treatment plant funds to a Long Island sewage authority on a number of counts, including that the Agency EIS failed to adequately consider economic factors such as engineering and operation cost data for specific alternative systems and environmental and secondary costs associated with the alternatives. The court ruled that NEPA invokes a balancing process of competing considerations a "broadly defined cost-benefit analysis of major federal activities" at 20150 (citing Chelsea Neighborhood Associations v. U.S. Postal Service 516 F.2d at 386). However, the court pointed out that this balancing process does not require a formal mathematical cost-benefit analysis of alternatives. The statute merely requires that a court determine whether than EIS

adequately identifies and evaluates the predicted economic result of each alternative at 20150.

6. Miscellaneous Provisions

Section 206 - Reimbursement and Advanced Construction

Section 206 authorizes the Administrator to reimburse those POTW's which were initiated between June 30, 1966 and July 1, 1973 and also between June 29, 1956 and July 1, 1966 the difference, between the original amount of federal assistance and 55 or 30%, respectively, of the total construction cost. The requirements for applying for reimbursement and advanced construction costs are laid out in this section for those applicants who, in the opinion of the Administrator, have met all of the other requirements of the Act. Communities may be reimbursed for proceeding with construction at their own expense if treatment works meets all of the other requirements.

Section 210 - Annual Survey

Section 210 directs the Administrator to make an annual survey of the federally funded POTWs in light of actual and planned efficiency of operation and maintenance.

Section 216 - Determination of Priority of Projects

Under Section 216 States were directed to determine the priority of POTWs to be constructed with federal money: those which are designed to achieve optimum water quality management and are consistent with the health and water quality goals of the Act are eligible to be on the lists.

Section 1299 - State Certification of Projects

The Administrator has 45 days after receiving a POTW grant application to make a decision on its approval under Section 1299. If no decision is made within that time, the grant is automatically considered approved.